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AMERICAN COLLEGE of SURGEONS

VOL. VIII JANUARY, 1924 NO. 1

HOSPITAL STANDARDIZATION SERIES

REPORT OF HOSPITAL CONFERENCE HELD AT CHICAGO, OCTOBER 22-23, 1923

AND

SURVEY OF HOSPITALS OF FIFTY BEDS AND OVER FOR THE YEAR 1923

AMERICAN COLLEGE OF SURGEONS
40 EAST ERIE STREET :: :: CHICAGO

STORAGE

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CONTENTS

Report of the Hospital Conference Held at the Clinical Congress of American College of Surgeons, Chicago, October 22–23, 1923

Morning Session—October 22, 1923

The American College of Surgeons and Better Hospitals. *Franklin H. Martin, M.D., Chicago* 5

The 1923 Survey—Problems and Conclusions from a Study Thereof and Plans for 1924. *Malcolm T. MacEachern, M.D., Chicago* 7

The Approved Hospital a Factor in Advancing Scientific Medicine. *Allan Craig, M.D., Chicago* 10

Hospital Standardization and the Community Hospital. *John B. McKenzie, M.D., Logieville, New Brunswick* 12

A Review of the Present Status of Nursing in the United States and Canada with Possible Future Developments. *Isabel M. Stewart, R.N., New York City* 14

Jeane Browne, R. N., Toronto 19

Hospital Standardization and the Medical and Nursing Professions. *Rev. C. B. Moulinier, S.J., Milwaukee* 23

The Care of the Patient in the Standardized Versus the Non-Standardized Hospital. *Robert Jolly, Houston, Texas* 25

Afternoon Session

The Value and Need of More Attention to End-Results and Follow-Up in Hospitals Today. *George Gray Ward, M.D., New York City* 29

The Registry of Bone Sarcoma as an Example of the End-Result Idea in Hospital Organization. *Ernest A. Codman, M.D., Boston* 34

A Scheme for Surgical Rating. *Ernest Leroi Hunt, M.D., Worcester* 38

The Problem of the Hospital Interne. *Nathaniel L. Faxon, M.D., Rochester, New York* 46

Round Table Conference "A"

Conducted by *Frank D. Jennings, M.D., Brooklyn*

Difficulties Encountered in Staff Organization. *Charles A. Gordon, M.D., Brooklyn* 49

Agenda for Staff Conference. *Felix P. Miller, M.D., El Paso* 50

Hospital Rules and Regulations. *John Jennings, M.D., Brooklyn* 51

Responsibility for Case Records. *Malcolm T. MacEachern, M.D., Chicago* 52

The Chief Surgeon and the Keeping of Records. *George H. Murphy, M.D., Halifax, Nova Scotia* 53

Access to Patients' Records. *Edward Evans, M.D., LaCrosse, Wisconsin* 54

The Record Clerk, Clinical Laboratory and X-Ray Technicians. *Edward A. Weiss, M.D., Pittsburgh* 57

Routine Pathological Examination and Basis on Which Charges Should be Made. *Robert Jolly, Houston, Texas* 59

Location of X-Ray and Clinical Laboratory with Relation to Service. *Malcolm T. MacEachern, M.D., Chicago* 60

CONTENTS

MORNING SESSION—October 23, 1923

SYMPOSIUM—HOSPITAL STANDARDIZATION

(a) STAFF ORGANIZATION

PRINCIPLES UNDERLYING GOOD STAFF ORGANIZATION. *C. S. Woods, M.D., Cleveland* 61

(b) CASE RECORDS IN HOSPITALS

1. ORGANIZATION OF AN EFFICIENT CASE RECORD DEPARTMENT. *John Wesley Long, M.D., Greensboro, North Carolina* 63

2. DIFFICULTIES ENCOUNTERED IN CASE RECORDS AND HOW TO OVERCOME THEM. *Miss Zula Morris, Grand Rapids* 67

3. SECURING, SUPERVISING AND FILING OF RECORDS. *Carl E. Black, M.D., Jacksonville, Illinois* 71

(c) LABORATORIES

AN ADEQUATE LABORATORY SERVICE IN THE MODERN HOSPITAL. *Ward Burdick, M.D., Denver* 78

(d) X-RAY

THE FUNDAMENTAL REQUIREMENTS FOR AN EFFICIENT X-RAY SERVICE IN HOSPITALS. *James T. Case, M.D., Battle Creek* 82

DISCUSSION. *Arthur C. Scott, M.D., Temple, Texas* 86

DEMONSTRATION—STAFF CONFERENCE

STAFF OF EVANSTON HOSPITAL, *Evanston* 86

AFTERNOON SESSION—ROUND TABLE CONFERENCE "B"

Conducted by *E. S. Gilmore, Chicago*

RESPONSIBILITY AND LIABILITY OF HOSPITAL IN REGARD TO CARE OF PATIENTS. *F. W. Slobe, M.D., Chicago* .. 88

DOCTORS' ORDERS. *Charles S. Pitcher, Philadelphia* 89

ROUTINE FOR PRE-OPERATIVE CASES

F. L. Koch, M.D., Chicago 91

Charles S. Bookwalter, M.D., Chicago 91

DIFFICULTIES WITH INTERNE SERVICE. *Ernst A. Sommer, M.D., Portland, Oregon* 93

ANÆSTHESIA IN HOSPITALS. *J. A. Merriman, M.D., Indianapolis* 94

APPRAISING OF HOSPITAL RECORDS. *Thew Wright, M.D., Buffalo, N. Y* 94

SYSTEM OF NOMENCLATURE. *Asa Bacon, Chicago* 95

RECORDING OF INFECTIONS. *George Stephens, M.D., Winnipeg, Manitoba* 96

RATIO OF INTERNES AND NURSES TO PATIENTS. *S. G. Davidson, Grand Rapids* 97

COMPUTING HOSPITAL DEATH RATES. *C. J. Cummings, Tacoma, Washington* 98

PHYSIOTHERAPY IN HOSPITALS. *Charles E. Stewart, M.D., Battle Creek* 100

HOSPITAL STANDARDIZATION REPORT FOR 1923 103

NUMBER OF HOSPITALS MEETING THE MINIMUM STANDARD 107

LIST OF APPROVED HOSPITALS 109

The Minimum Standard

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word STAFF is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," "the visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are (a) full graduates of medicine in good standing and legally licensed to practice in their respective states or provinces; (b) competent in their respective fields and (c) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.

3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide:

(a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)

(b) That the staff review and analyze at regular intervals their clinical experience in the various departments of the hospital, such as medicine, surgery, obstetrics, and the other specialties; the clinical records of patients, free and pay, to be the basis for such review and analyses.

4. That accurate and complete records be written for all patients and filed in an accessible manner in the hospital—a complete case record being one which includes identification data; complaint; personal and family history; history of present illness; physical examination; special examinations, such as consultations, clinical laboratory, X-ray and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings.

5. That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis, and treatment of patients, these to include, at least (a) a clinical laboratory providing chemical, bacteriological, serological, and pathological services; (b) an X-ray department providing radiographic and fluoroscopic services.

REPORT OF THE HOSPITAL CONFERENCE OF THE CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS, HELD IN THE CONGRESS HOTEL, CHICAGO, OCTOBER 22–23, 1923

MORNING SESSION—OCTOBER 22, 1923, PRESIDENT HARVEY CUSHING, M.D., BOSTON, PRESIDING

THE Hospital Conference of the Clinical Congress of the American College of Surgeons opened its session in the Gold Room of the Congress Hotel, Chicago, at ten o'clock, on the morning of October 22.

The meeting was called to order by Dr. Allan Craig, Chicago, Associate Director of the American College of Surgeons.

ALLAN CRAIG, M.D.: Ladies and Gentlemen: Owing to the fact that the train on which Dr. Cushing is to arrive is late, Dr. J. G. MacDougall of Halifax, one of the Vice-Presidents of the College, will preside until the President arrives.

(J. G. MACDOUGALL, M.D., takes the Chair.)

CHAIRMAN MACDOUGALL: Ladies and Gentlemen: We have a very interesting and important program this morning relating to hospitals. I shall not take up your time by making any remarks but shall at once call upon the first speaker, Dr. Franklin H. Martin, Chicago, Director General of the American College of Surgeons, who will now address you on *The American College of Surgeons and Better Hospitals*.

FRANKLIN H. MARTIN, M.D.: Ladies and Gentlemen, Sisters and Fellows of the College: Each year, in the olden times, the old chief would get together the tribe and cut a notch in the stick. That represented so many moons had passed since the last meeting. Today for the seventh time I have an opportunity to come before the members of the College, and while I am not by any means nor do I claim to be the great chief, I am here to cut the notch in the stick for another year. Don't think for a moment that my soul does not swell with pride when I look upon this group of men and women interested in hospital betterment who have been called here by the inspiration of the program that has been put over by the American College of Surgeons.

My duties are very simple this morning. I am here merely to make an announcement. You all know that the American College of Surgeons, through difficulty of administration in the selection of its members, conceived the necessity of standardizing the workshops of its candidates for Fellowship, the workshops wherein they must continue to render their service to the public after they become Fellows of the College. That was purely selfish on the part of the College at the beginning. We had to find a way of selecting our Fellows, and in order to judge of their ability as surgeons we had to know about their workshops and about the records of their workshops. Immediately this appreciation of the necessity of a standardized workshop for surgeons made it obvious that a similar need existed in the workshop of the internist, the obstetrician, and all specialists of medicine. We started out as surgeons, and this program has become a universal program, applying to all specialties of medicine.

The American College of Surgeons, with the enthusiasm of youth and unhampered by tradition, decided to make itself responsible for the standardization of its own environment, the hospital. This environment became the subject of study. Two generations of personal sacrifice and individual effort already had placed the worthy hospitals of the United States and Canada in a position of usefulness to all grades of society, causing astonishment and envy in England and Continental Europe, and the other countries of the world.

These worthy institutions and the great churches and societies responsible for their existence at first looked askance upon the ambitious program of the youthful society, but soon they recognized its sincerity and welcomed its disinterested aid.

In the beginning the College accumulated valuable data through conferences, correspondence, and a carefully conducted research into hospital management. This information revealed three outstanding problems that required solution by an organization that hoped to aid in the betterment of hospitals: First, the establishment of a Minimum Standard; second, a personal visit to each institution by a representative of the stand-

ardizing agency; and third, an accurate record of the findings of the representative that would be available to the public.

In formulating the program which has been pursued intensively for seven years, the College has held many conferences and has consulted every one known to be interested in hospital management and hospital betterment. A minimum standard was agreed upon, the provisions of which were fundamental. Briefly, the minimum standard, with which it was believed every hospital should conform, provides the following:

1. An organized medical staff comprised of qualified physicians and surgeons.
2. A monthly meeting of staff members to review the professional work of the hospital.
3. A system of comprehensive case records.
4. An acceptable clinical laboratory.
5. Satisfactory evidence by the hospital authorities that the medical staff of its institution is comprised of legal practitioners of medicine who are opposed to the division of fees.

This was the program decided upon. Its requirements were reasonable; its methods of presentation were acceptable; and the work of the investigators, because of the personal visits and the impartial manner of making the reports, appealed to the hospitals as an honest and disinterested effort to arrive at facts. The information conveyed to the public as the result of our surveys has been generally approved.

Without ostentation this movement for the standardization of hospitals has been its own propagandist. It has convinced the medical profession that a great event has been transpiring; that when two or more individuals get together in harmony, even in the profession of medicine, and pursue a course of self-betterment, the results are stupendous and the effect inspiring. Every hospital trustee, every superintendent, and every nurse of the North American continent has been drawn into the vortex of this movement, and each one prides himself on his part in it. The public has been consulted by a hitherto exclusive profession of medicine, and has been asked to share the responsibility of aiding in the betterment of hospitals. Business men of large and small communities have learned that the profession of medicine can conduct its affairs in a businesslike manner as well as wield the scalpel and administer drugs. One of the conservative philanthropic foundations, the Carnegie Corporation, after a thorough investigation of this program, for five years contributed toward its financial support a sum aggregating one hundred and five thousand dollars, in addition to a sum of two hundred and twenty thousand, two hundred and eighty-three dollars contributed by the College, representing a total expenditure from the beginning of three hundred and twenty-five thousand, two hundred and eighty-three dollars.

The American Hospital Association is coöperating with us in this work; the Catholic Hospital Association is coöperating with us in this work; the Protestant Hospital Association and the Methodist Hospital Association are also coöperating with us in this movement, and practically all of the hospital associations of this continent are body and soul behind this program.

How much easier it is to do a big thing than a little thing! Back of this movement has loomed a great ideal—harmony of action between all peoples, and a great profession dedicated to relieve suffering, to make whole the cripple, and to guard those enjoying health against sickness. The profession of medicine, through this movement, has been able to take the people into its confidence, and the public has had a glimpse of the reliability of the art of scientific medicine. The mystery has been swept away, as with the parting of the veil, and in the place of misunderstanding has been revealed the romance of accomplishment. This revelation of an ideal has brought forth on the part of those who have seen, a desire to become a part of it by rendering service under its leadership. It is not unlike the inspiration imparted by a national or a religious emblem; it has thrilled, and it has compelled loyalty.

The Hospital Standardization movement of the American College of Surgeons is destined to reach far into the future. History will record that with the beginning of this event curative medicine and the people entered into an understanding with each other for the first time (that is the most important thing of this whole movement); and that this understanding revealed the profession of medicine as the legitimate conservator of health, and the hospital as the laboratory in which the most serious part of its work can safely be accomplished.

Inasmuch as the American College of Surgeons initiated this program for better hospitals, and inasmuch as it has assumed the burden of financing the movement, obviously it must take the responsibility of continuing its work. The analysis of its surveys in the past has contented itself with announcing a list of those institutions which have met or exceeded the minimum standard. The mass of interesting material that has been accumulated in the seven years' survey of the College offers a great temptation to make a comparison of hospitals, which would result in a classi-

fication. If any one can classify hospitals we are certainly in a position to do it because we have all the data. It is feared that any attempt to grade these institutions might interfere with its influence as a disinterested observer, because of the danger of a charge of invidious comparisons. It may become the duty of the College to grade the hospitals upon the approved list when a larger percentage of all of these institutions have met our present standard, or a more rigid standard.

Meanwhile, this storehouse of information is legitimately the property of organized medicine, the hospital administrators, and the people who are supporting the hospitals of the continent. The College is its legitimate custodian and will at all times be ready to impart information to inquirers who may desire to utilize it in the improvement of hospitals.

This is the cutting of another notch in the stick. The full report which I am about to summarize will be placed in your hands at the end of this meeting, giving a complete list of the hospitals surveyed during the last year and those that are on the approved list.

Following is the summary:

Hospitals surveyed, 1786.

Hospitals approved, 1181, or 66.1 per cent.

Of the 1786 hospitals surveyed, 870 were of 100 bed capacity or over, and of these, 751, or 86.2 per cent, met the approved standard.

Of the 1786 hospitals surveyed, 916 were of fifty to one hundred bed capacity, and of these, 430, or 46.9 per cent, met the approved standard.

We have been working on the fifty bed hospitals for but two years, on the one hundred bed hospitals for seven years. That accounts for the discrepancy between 86.2 per cent of the larger hospitals being approved and but 46.9 per cent of the smaller hospitals; that is one reason for it.

Our progress in the survey of six years may be summarized by this table, which will be analyzed in detail by our Associate Director, Dr. Malcolm T. MacEachern. You all know that in 1918 we surveyed 692 one hundred bed hospitals, and only 89 met this minimum standard, or 12.9 per cent. In 1919 we surveyed 692 one hundred bed hospitals, and 198, double the number of the year before, were approved, or 28.6 per cent. In 1920, we surveyed 692 hospitals of one hundred bed capacity, and 407, or 58.8 per cent, met the standard. In 1921, 761 hospitals were surveyed, and 573, or 75.3 per cent, met the standard. In 1922, 812 were surveyed, and 677, or 83.4 per cent, met the standard, while this year, 1923, 870 one hundred bed hospitals were surveyed, and 751, or 86.2 per cent, met the minimum standard.

Of the fifty to one hundred bed hospitals last year we surveyed 812, and 335, or 41.3 per cent, met the standard. This year we surveyed 916, and 430, or 46.9 per cent, met the standard. Finally, let us look forward during the coming year to an increased interest in this great movement which is so all-embracing and of such vital importance to the public, the hospital, medical and nursing professions.

(PRESIDENT HARVEY CUSHING, of Boston, takes the Chair.)

PRESIDENT CUSHING: Ladies and Gentlemen: You have heard the very inspiring report of the Director General. The next speaker on the program is Dr. Malcolm T. MacEachern, Associate Director of the American College of Surgeons, who has charge of the Hospital Activities of the College. He will address you on *The 1923 Survey—Problems and Conclusions from a Study thereof and Plans for 1924.*

MALCOLM T. MACEACHERN, M.D.: Mr. President, Ladies and Gentlemen: From what you have already heard, you fully realize that a need for better hospital service was discovered. A way was carefully worked out to meet this need. A minimum standard was formulated after due thought and investigation. This minimum standard has been presented in a comprehensive and practical manner ever since the year 1918. A service has been given, free of cost, to the general hospitals of the United States and Canada of fifty beds and over. Finally, there has been established a movement that is not transient, but permanent, and one which will go on year after year in the interest of better hospital service.

There are three principles necessary for the success of this movement: (1) There must be a belief or conviction in the minds of the three great hospital groups, namely, the board of directors or trustees, the medical staff, and the hospital staff, that hospital standardization is a genuine movement and really worth while. They must have their minds made up that they want hospital standardization. (2) The three groups must cooperate to their fullest extent. (3) There must be leadership in order that the movement may be established and well carried on. Without these three essentials we have found that hospital standardization cannot be a true success in any institution.

The Director General has given you the figures of the 1923 survey. (At this point Dr. MacEachern threw on the screen a number of slides showing the results of hospital standardization in 1923, and the progress during six years. These figures follow.)

1923 SURVEY

HOSPITALS OF 100 BEDS AND OVER

	Hospitals surveyed	Hospitals approved	Per cent
United States	806	699	86.7
Canada	64	52	81.3
Total	870	751	86.2

HOSPITALS OF 50 TO 100 BEDS

	Hospitals surveyed	Hospitals approved	Per cent
United States	837	384	45.9
Canada	79	46	58.0
Total	916	430	46.9

100 BEDS AND OVER

Year	Hospitals surveyed	Hospitals approved	Per cent
1918	692	89	12.9
1919	692	198	28.6
1920	692	407	58.8
1921	761	573	75.3
1922	812	677	83.4
1923	870	751	86.2

50 TO 100 BEDS

1922	812	335	41.3
1923	916	430	46.9
Total Hospitals Surveyed			1786
Total Hospitals Approved			1181
Total Percentage Approved			66.1

The results of the sixth annual survey of the American College of Surgeons is shown in the report which will be handed to you as you leave the hall this morning. During the year the work increased considerably, the magnitude of which can only be realized from the following statistics: There were nine visitors sent out by the College to cover the hospital field. These men did an aggregate of sixty months (or five years) of survey work in 1923. The 1,786 hospitals visited contained 237,946 beds, caring for approximately 4,758,920 patients during the year. The estimated days' treatment for this group is 71,383,800. Out of this number of hospitals the College has put its mark of approval on 1,181 or 66.1 per cent, having a total bed capacity of 191,042 and caring for approximately 3,820,840 patients with an estimated days' treatment of 57,312,600 for the year. The visitors traveled an aggregate of 75,000 miles. There were over 3,500 follow-up letters sent out regarding findings in the hospitals visited. In addition to all this, some twenty-two sectional meetings of the Clinical Congress of the American College of Surgeons were held in various parts of the United States and Canada. At each meeting an interesting two-day program was provided, a considerable portion of which was devoted to hospital standardization. Further, some twelve special meetings were held for the express purpose of promoting standardization. Thus the hospitals of the United States and Canada have been reached not only through the personal contact and efforts of the visitor, but through group meetings covering the entire continent annually. All this indicates the opportunity the College has through the program of hospital standardization for extending its beneficial influence in bringing about better service in hospitals. This year the entire expense of this expert advice and service given to hospitals is borne by the College through its membership.

There is an increasing demand made on the College for service in two particular directions. There is an urgent request from the hospitals of fifty beds and under to extend the survey to them during the coming year. This request comes in many instances not only from the institutions individually, but also from groups in different states and provinces. There are a large number of hospitals under fifty beds and many of them are already fully standardized. At present we are looking into this problem and hope for an early solution. The College is anxious to extend its survey just as far as time and budget will permit. In addition, there is the demand for increased service from the institutions now on our visiting list. Hospitals are thoroughly alive to the need of improving service along the lines of the professional care of the patient. To this end the College has opened up a bureau of information in the hospital department, so that it may be able to give a more extensive background of service.

In making an analysis of one hundred of the hospitals of one hundred beds and over, which have not met the standard, the following interesting facts as to deficiencies were revealed:

(a) Staff organization	
Organized	71
Not organized	29
Regular meetings	43
No meetings	57

From these figures it may be seen that at least 57 per cent of the group referred to were deficient in organization, one of the first principles laid down in hospital standardization.

(b) Clinical analysis	
Complete	4
Partial	32
None	64

This means that 96 per cent of the hospitals failed to have proper staff analysis of work—one of the most important essentials in every hospital.

(c) Case records	
Complete	3
Incomplete	(a)
Nurses' notes only	28

Of this group of hospitals, 97 per cent failed to meet the case record requirements.

(d) Official action against fee-division	
Official action by staff and trustees	27
No official action	73

Thus 73 per cent of the hospitals were deficient in respect to action against fee-division, another essential of hospital standardization.

(e) Clinical laboratory	
Supervision	
Doctor	20
Technician	52
None	28
Records	58
Routine pathology	28
No laboratories	2
Charges	
Flat rate	15
Schedule of prices	57
Charity	10
No charges (State, Contract, etc.)	18

So far as supervision of laboratory work was concerned, 80 per cent failed to meet the requirements and 72 per cent failed in carrying on routine pathological work in the hospital.

(f) X-ray laboratory	
Supervision	
Doctor	25
Technician	55
None	20
Records	47
No X-ray	4

In the X-ray department of these hospitals, supervision was lacking in 75 per cent and records in 53 per cent.

Unfortunately in a few hospitals there are factions and jealousies still existing, thus preventing the coming together of groups in the best coöperative spirit. In some instances there is lack of interest in the hospital. We find the physician interested entirely in his personal or individual practice and thus not able to give his time for anything else. It is true that fee-splitting is keeping a number of hospitals off the approved list today. There is in the minds of some a misunderstanding as to what the program really is. Some believe it is a movement just to bring in a group of select people. It must be remembered that the program is all inclusive and not exclusive, and has for its fundamental purpose the making of our hospitals the better place for the patient, for the doctor, and for the staff, so that as close as possible to 100 per cent efficiency may be maintained.

The most important deficiencies in case records met with in the survey are as follows: Lack of organization and physical facilities; lack of trained personnel in hospitals such as historians or record librarians; records brief and incomplete with many of the histories delayed or not written up until the patient is going out or afterwards; and finally, records not properly supervised. All these defects are remediable through the attention and direction of an efficient record committee in each hospital. This must be a department in every institution properly directed and well supervised.

There is difficulty in securing competent supervision and direction of laboratory and X-ray service in every hospital. Qualified radiologists and pathologists cost considerable money and many institutions are not financially able to meet this expense. Technicians are doing wonderful work in these departments in most hospitals. They, however, cannot assume the entire responsibility for all of the work, and, in the X-ray department in particular, are not capable of making the interpretations. Both departments, therefore, must have competent supervision.

The minimum standard has not been altered in any respect. It has always been flexible and adaptable, thus allowing each hospital to work out its own problems in respect to the principles laid down. The standard sets forth principles which the hospital can meet in such a manner as best suits that particular institution. There is no desire on the part of the College to interfere with the individual initiative of any hospital. The standard set is the minimum requirement. Every institution is encouraged not only to reach that standard but go as far beyond it as possible. The principles laid down are fundamental. They are the characteristics which identify the hospital as a scientific institution.

The American College of Surgeons does not classify hospitals. It simply puts its mark of approval on hospitals surveyed, meeting the minimum standard requirements. All such hospitals are then placed on the Approved List which is announced annually. The first task to be accomplished is to have each and every hospital meet the minimum standard or, in other words, to encourage and assist every hospital to have at least the minimum organization procedure and service that is fundamentally necessary in any institution caring for the sick. We generally find that once this is attained and the hospital has been put on the Approved List, greater stimulus

and enthusiasm follows and development comes more rapidly. Hospitals appreciate having a basic standard from which they can work upwards. In the past six years this standard has proved to be practical. During the great World War similar principles were applied to the medical service with success. There was organization of the medical staff, staff conferences at frequent and regular intervals, case records on all patients, laboratories and X-ray service. Consultations, conferences, and review of the work were carried out regularly and systematically. Today we are applying the same principles to civil hospitals in the form of the minimum standard.

What about the 1924 survey? It will commence on January 2, 1924. During the coming year an attempt will be made to secure more information in regard to various problems affecting the professional care of the patient. This information will be carefully considered and eventually the hospitals themselves will secure the benefit thereof. There will be an increased background of service from the College in every possible way. At the present moment it is doubtful whether or not we will be able to take in any of the hospitals between twenty-five and fifty beds, in addition to the present number we have on our list. Hospitals with an asterisk in the 1923 list will be expected to have improved so that the asterisk can be removed before our next list is published. The United States and Canada will again be covered by the Sectional Meetings of the American College of Surgeons. A part of the program as in the past will be taken up with hospital standardization in its different phases.

In conclusion, let me state that, although hospital standardization is still in its youth, it has proved an indispensable factor in increasing the efficiency of our hospitals. The reason for the success of this movement is primarily because it is based on facts. The groundwork and the foundation for hospital standardization have been laid and the superstructure built wisely and well. Our institutions have increased at least fifty per cent in their efficiency during the last six or seven years, since the College took up the cause of hospital betterment. We find better buildings, better equipment, better organization, better personnel, but, above all, better working together. Let us hope that this improvement will continue vigorously during the coming year.

PRESIDENT CUSHING: Dr. MacEachern has given us this definite and clear outline of work which has been accomplished by the American College of Surgeons and the work which we anticipate accomplishing in the future.

The next speaker will be Dr. Allan Craig, Associate Director of the American College of Surgeons, State and Provincial Activities, who will tell us about *The Approved Hospital a Factor in Advancing Scientific Medicine.*

ALLAN CRAIG, M.D.: Mr. President, Ladies and Gentlemen: It seems hardly possible to realize that a whole year has passed since we met in Boston, but we are assembled here in this Congress to look over the milestones along the way, and to realize perhaps the progress that the College has made in hospital standardization and in its program.

As civilization has developed, those forces which were regarded by primitive man with dread and mysticism have gradually come under human control. Man has harnessed many of the great powers of nature and has made them his servants; so it is with disease. Every illness, instead of being regarded with mystic dread, may become the servant of scientific medicine in providing a key for the solution of the problem of health. This, however, can only be when the trained mind both individually and collectively gives careful consideration and study to the process of disease in every human victim. The fact is that every individual who becomes ill presents an opportunity for the human mind to study and coöperate with nature in combating those forces which would tend to destroy life. Every patient is, in other words, an opportunity for the observant medical man if he would only recognize it.

Our present knowledge of scientific medicine is based upon past experiences and observations. The fundamental basis of medical education rests in the training of the individual to observe and to form logical conclusions based upon reliable observations. Education is not a matter of memory —it is rather a training of mind and senses in order that we may deduct facts and apply them toward obtaining certain requisite results. The worth-while physician never ceases to be a student. Day by day in the hospital wards, in his office, or in the homes of his patients, he is accumulating a fund of valuable information through personal experience.

In the practice of medicine we should consider each individual patient as a separate problem. These problems may be segregated in groups which approach a similarity but are not entirely alike. By a study of groups of cases, we are able to strike an average of valuable information concerning conditions of the human body peculiar to diseases of certain organs. For instance, a study of an individual thyroid case, while of value to that particular patient, does not add so much to medi-

cal science as a whole as the study of a large group of thyroid cases and the working out of the average of indications of derangement of functions. It is not possible, however, to study the group without first studying the individual. Each patient in our hospitals has a personal responsibility in that the study of his case may add something to our average of knowledge and be of assistance to others who may be so unfortunate as to develop the same complaint. Thus, whether we consider our patients as individuals or as groups, those patients have individually and collectively the right to contribute something to medical knowledge and advancement for the protection of the race. The hospital standardization movement of the American College of Surgeons requires that the medical staff shall study the patients under treatment in the institution from a scientific standpoint. It is to be hoped then that not only the staffs themselves, but the patients as well, will realize a due responsibility in this valuable requirement.

As one looks over the work in many of our hospitals and discusses cases with various members of the medical profession, there seems to be in a great many instances a tendency to individual diagnosis. We sometimes are inclined to forget that a patient with a fractured femur may have numerous other disorders at the same time. A careful study of the patient in the hospital ward, which includes a thorough examination, will reveal existing conditions. Every patient has a right to expect that he will be given a thorough overhauling when he goes to a hospital for treatment. Some patients may object, because they are afraid to face the truth. They prefer to carry on blindly and neglect the opportunities for the preservation of their health. No institution, however, can rightly consider that it is carrying out its full duty which does not offer or even insist upon a complete physical inventory in the case of each patient. When a patient enters a hospital, he is placing himself in the hands of those scientifically trained and equipped to do the very best possible to restore and promote his physical welfare. In consequence of this, how absurd it appears to have a hospital present what might be termed a "Laboratory Menu" which states "We will count your blood-cells for five dollars" or "X-ray your chest for ten dollars"—"Pay your money and take your choice." Such procedure is so ridiculous as to require no further comment.

In order that this work may be thoroughly carried out and that everyone should have full advantage of all the knowledge available for scientific treatment and investigation, hospital standardization requires that every institution coming under the minimum standard shall have an efficient laboratory and X-ray service.

In times past it was frequently said that so and so had a fever. Certain anti-pyretic drugs were used to reduce fever. It was not realized at that time that the temperature was but an indication of existing disturbance of body function and that in reducing it, in many instances we were destroying the indicator and the valuable means by which we could judge the condition of the patient. The day has long past when the treatment of symptoms could be considered as an adequate practice of medicine. Making the patient comfortable is, without doubt, important, but we must go far beyond symptoms and deal with the cause as well as with the effect. Any hospital or hospital staff which would permit such bygone and unscientific practice of medicine to be carried on knowingly in the wards or any department would be entirely unworthy of recognition in the field of humanitarian service today. The physician who bases his diagnosis entirely on some outstanding sign is not a reliable diagnostician. He may occasionally or even frequently make a brilliant guess, but his judgment is not sound. A careful recording of history, physical findings, laboratory and other data lessens the element of chance or guesswork and presents the patient's case as a concrete problem.

Every patient has a right to the best means available to medical science for prolonging his life and promoting an expedient recovery. One of the requirements of hospital standardization is that the institution shall keep records of the patient coming under observation or treatment. The valuable work given to the medical world by Sir James MacKenzie on heart conditions was the result of carefully recorded observations on patients over a considerable period of time. Osler's treatise on medicine, the most valuable contribution up to the time of its publication, was the combined result, coördinated effort, and recorded observations of many scientific minds. Such a masterpiece could not have been prepared from memory but must have been compiled by way of careful record. It is not expected that every hospital in this country shall take part in the compilation of a great manual of medicine or surgery, but the institution which does not demand a careful record of its work is not playing the game or fulfilling its responsibilities. Slipshod methods or guesswork in hospitals is criminal. Human life is the most precious thing in the world and our hospitals are dealing with human life. We cannot imagine a bank being run without books or records

of any kind. The material which they are handling is too valuable to take any chances. Our hospitals are handling something of inestimably greater value than our banks. Why should we not then consider our system of management as carefully if not more so?

Medical science cannot travel in a rut or be unmindful of its environment. Every patient in our hospitals, whether rich or poor, high or low, is an individual member of the human race, with his problems, sorrows, joys, and disappointments. As the leaves of the trees vary, so do our patients show different types of character and mentality. Why does the practitioner of quackery and cultism, absolutely ignorant of the science and art of medicine, often have a large following? Because he is an astute student of the mental attitude of his patient. He satisfies the patient. Let us not, then, in developing the scientific details of modern medicine, neglect the humanitarian necessities.

We are looking to the day when from every standardized hospital on this continent will come an annual contribution to medical science based on sound and safe records of observations and work. The mass of knowledge thus made available would be the greatest contribution to medical science for the preservation and prolongation of human life that the world has ever known.

PRESIDENT CUSHING: In short, we are committed to three things,—to observation, to experiment, and to recording—to observation for our training, to experiment because everything we do in the way of therapeutics is an experiment, and to making records for reasons which Dr. Craig has given and for another reason which I would like to add which is more important than any, namely, for our own personal training. Without records your work is really for naught; however much good those records may be for others, they are most vital to yourselves. Nor need Dr. Craig have limited himself to the physician for illustrations of the advantage of this method, however great the names of MacKenzie and Osler are to us.

Now I shall call on a modern exemplar of that great conjugation of medicine and theology, the Reverend Charles B. Moulinier, S.J., of Milwaukee, President of the Catholic Hospital Association. I understand he has not yet arrived. Reverend Moulinier is too important a person for us to fail to hear. Let us hope he may appear later to take part in this morning's program.

The next subject is *Hospital Standardization and the Community Hospital*, by Dr. John B. McKenzie, Logieville, New Brunswick, Surgeon to Miramichi Memorial Hospital, Newcastle, and Hotel Dieu Hospital, Chatham, New Brunswick.

JOHN B. MCKENZIE, M.D.: I hesitated to come before the College of Surgeons, but I am here for three reasons. In the first place, my friend Dr. MacEachern told me to come, and he generally gets what he goes after. In the second place the staffs of the two hospitals with which I am connected, at their meeting some time ago, told me I must go down to Chicago and tell the Congress about what is going on in New Brunswick. I told them I did not feel like going as I was not a public speaker, but I was informed I had to go. One blunt old gentleman summed the whole thing up very well when he said, "McKenzie, you can go down and say 'Thank you'." I, therefore, felt it was my duty to come here this morning and thank the American College of Surgeons for the great work it is doing for the small hospitals in the province of New Brunswick.

I am here for a third reason. I have heard it said, and said it myself through lack of knowledge, that the program of the College on hospital standardization was of very little or of no value to the small hospitals. I will confess that before I saw for myself the results of standardization, I thought pretty much the same. I felt that the discussions which took place at our meetings were more applicable to the larger hospitals in the bigger communities than to the smaller hospitals. Now I know that the College with its program of standardization has done as much, and I think even more, for the small institution as for the large one.

I come from a small town in northern New Brunswick, a lumbering district, and I would like to make you see the thing as I have seen it. The practice of surgery in the smaller communities in the eastern provinces of Canada has undergone a great change in the last twenty-five or thirty years. Formerly patients requiring expert surgical treatment had to travel long distances to the larger communities, to St. John, a distance of some two hundred miles or more, more often to Boston or New York, some six or seven hundred miles, entailing much hardship and expense, which placed such treatment beyond the means of all except those who had considerable money. Within the past twenty-five or thirty years in the eastern provinces of Canada there have been established in practically every community of 5,000 or over, small hospitals, supported partly by government aid, provincial and municipal, but more largely by individual gifts from people who go to make up the community which the hospitals serve.

To these hospitals and communities the program of standardization has meant even more than to the larger institutions, because the things which standardization calls for—accurate case reporting, efficient laboratory equipment, regular staff meetings, follow-up systems—were practically non-existent. Fee-splitting we haven't very much of, and in fact I don't know of its existing in New Brunswick, perhaps because a good many of the men down there are Scotch and hate to part with any money. You know they say that the difference between a Scotchman and a cart is that the cart tips.

In a small province the results of standardization have been first, a much more careful and conscientious study of the cases. One does not care to come before a staff meeting with an inadequate case report or with insufficient data upon which to base a diagnosis. You would get it right in the neck in our hospitals.

Second, a much more capable group of surgeons is being developed; men will take care to fit themselves to do good surgery if they know good surgery is going to meet commendation on the part of their confrères, or just criticism if inefficiently or carelessly or causelessly done. The day is gone by when you can see, as I have seen in our hospitals, a simple operation for inguinal hernia take three hours and forty-five minutes. We wouldn't dare go before a staff meeting with a report of that kind.

Third, a better educated group of doctors is being attached to the hospitals. A man who is compelled to discuss his cases and failures before his confrères will take care to keep himself well informed and will develop ability to express himself clearly and succinctly. This is of benefit to our societies, medical and surgical, in the different communities in which we live.

For the benefit of men from small communities, may I say just a word about a plan which we have adopted at our staff meetings, in order to make them more interesting and of more benefit to us. We assign to each member of the staff some subject for particular study during a period of three or four months. Each member has a subject, endocrinology, surgery, gynecology, or some other subject, and each member reports what he has read or studied at each meeting. In that way each man gets the benefit of the other man's reading. Men in small communities are busy, and a man in this way acquires a more comprehensive knowledge of subjects in general. We have found it to create great interest in our small staff meetings and to be of inestimable value and benefit to each individual composing the staff.

Fourth, a much better feeling of fellowship and *esprit de corps* is brought about on the part of those men practicing in small communities. It would do your heart good to see the difference in the fellowship which has taken place in the small communities where I live; the petty bickerings and all that sort of thing are forgotten. When a man comes to respect his fellow-practitioner, friendship will follow, and there is a much better feeling of comradeship among the men practicing in small communities. To illustrate this, the day before I left home there wasn't one man in the two hospitals in which I practice who didn't call up my home and say, "If any of the children get sick while you are away, just tell them to call my office, and if there is anything in the hospitals that I can do for you, let me do it." Each man considers each other doctor his friend.

Fifth, a greater feeling of confidence is created upon the part of the community in the hospital and the men by which it is served, and consequently a greater measure of support, both personal and financial, for the institution.

Sixth, it has increased the power of the small or community hospital to obtain nurses of good character and ability. Standardization has done much to offset the lure of a great city and a large institution, which often made it difficult to obtain good and efficient nurses.

These, gentlemen, are my reasons for saying that the program of standardization has been and will continue to be of inestimable value to the small community hospital and the doctors practicing therein. The American College of Surgeons may be assured of the hearty support of these communities and these men in its great work, and surely these things mean great good to suffering humanity.

I intended to make one or two suggestions to improve and advance the work of the American College of Surgeons in small communities, but I see by the program that they are going to be fully discussed; I have just one suggestion to make to the College of Surgeons, and that is that it should use more publicity in the smaller communities about its aims and ideals. A great many men and women in the smaller communities do not know what the American College of Surgeons means to the community and to the hospitals. Let the College use the papers in the smaller communities to place its ideals and aims before the people of those communities, and if you will get, as you will, the doctors, the hospitals, and the people of the community working together to further the aims of the College, you will accomplish a work second to none for the good of suffering mankind.

PRESIDENT CUSHING: Dr. McKenzie need have no misgivings in regard to the message he had to bring to us from Logieville, New Brunswick. The size of a community need not be measured by the number of the people that dwell therein. The size of a community may very well be estimated in the spirit that community shows, and I for one think I should rather be engaged in the practice of medicine in the town of Logieville, in a community such as Dr. McKenzie has pictured, than in many another metropolitan community of my acquaintance. If the American College of Surgeons has had the remotest part to play in bringing about such a picture of professional good-will and harmony as has just been drawn before us, it has justified its existence.

The nurse has much to do with our success in our work, whether we be physicians or surgeons, and it is a very great pleasure to call upon Miss Isabel M. Stewart of New York City, Assistant Professor of Nursing, Columbia University, and subsequently upon Miss Jean E. Browne of Toronto, President of the Canadian National Association of Trained Nurses, to speak on *A Review of the Present Status of Nursing in the United States and Canada with Possible Future Developments*. Miss Stewart.

MISS ISABEL M. STEWART: *Need for Freer Discussion:* I don't mind confessing to you that I have been rather overcome by the responsibility of presenting such a vital and important subject before such an influential and weighty body as yours, but I was afraid to refuse for fear the opportunity might not come again very soon to have this subject discussed from a nurse's point of view.

I happen to belong to one of those medical families where the nursing and the medical representatives have been accustomed to thresh out with the greatest frankness and freedom all those subjects of common and sometimes conflicting interest which lie in the sphere of our two professions. I have sometimes wondered why we do not use this method more frequently in the larger medical family. Of course we shall not always agree, but my experience is that we are always much nearer agreement than we thought we were in the beginning, and the airing of our various viewpoints seems to relieve some of the tension, even when it does not materially alter the previous opinions of either party. Will you forgive me then if I seem to forget for the time being my best bedside professional manner (it is dreadfully out of practice, anyway) and talk rather frankly about the situation in nursing education as many of us see it today.

Review of the Main Stages of Nursing Development: To understand the present situation in nursing it is well, I think, to take a very hurried glance at the stages we have passed through in arriving where we are today.

This year we are celebrating the fiftieth anniversary of the founding of the three outstanding pioneer Nightingale schools in America, Bellevue in New York, Massachusetts General in Boston, and the Connecticut Training School in New Haven. So it is a very good time to take stock of what that system has accomplished, to see whether it is meeting the needs of today or whether like some other good institutions of the nineteenth century it ought to be remodelled a little to meet the more exacting and varied requirements of the twentieth century.

Before 1873, although there were several hospitals in the country and many people employed as nurses and attendants, there was nothing that could be considered as a definite system of training for nurses. There were no qualifications for entrance to this vocation beyond those which would be required of a very inferior type of household servant. There was no systematic instruction of any kind. The workers picked up what they got from each other or from the doctors, but most of them muddled along without anything one could call teaching or even supervision.

There is no use recalling the horrors of those old hospitals, the dirt and disorder, the cruelty and neglect, the political graft and the unspeakable moral corruption—particularly in the public hospitals. Those who want to get a pretty vivid picture of what hospitals can be under that kind of a nursing system, even with religious orders in charge, should visit some of the continental or South American hospitals where much the same conditions exist today.

In 1860 Florence Nightingale established in connection with St. Thomas's, London, the first real modern school of nursing. It was an astounding revolution which she proposed—but she "got it over"—first to the group of splendid women who answered her call for recruits and finally to the medical profession and to the public. In 1864 a small school on the new basis was started in St. Catherine's, Canada, and in 1873 came the three pioneer schools in the United States, copied almost entirely from the Nightingale pattern which was in most respects a remarkably sound educational scheme and far advanced for that day.

It is interesting to trace in the new system the influence of the religious sisterhoods, both Catholic and Protestant, with their traditions of self-abnegation and obedience, their acceptance and

idealism of drudgery, and their belief in the simple cloistered life. Miss Nightingale was familiar with this system from her own training and she had also been profoundly impressed by the military system of training with its precision and order, its Spartan austerity, and its rigid discipline. The system of apprenticeship was the prevailing system of education in her day not only in the trades, but in the training of professional workers, and it was natural that it should have influenced Miss Nightingale considerably. The result was a combination of certain features of all these systems, with a good deal from her own marvelously creative intelligence and practical experience.

The first nursing school was attached to a hospital which was the training ground, or as she called it, the "work shop" for her students, but she was determined to safeguard the school against the domination of the hospital by giving it a separate board and a separate endowment which paid for instruction and supervision and many other educational essentials.

This sound and far-sighted policy of the founder of nursing was very soon thrown overboard. Very few hospitals or medical people wanted the "lady" nurses at first and they were reluctantly admitted to the hospitals, but as soon as they showed that they could really cover the work of the hospital and do it a good deal better and a good deal cheaper than the old servant nurse, every hospital wanted to own its training school. The educational responsibility was accepted rather lightly, I am afraid, and no one thought it was necessary to have any special funds set aside for the work of the nursing school, as distinct from the hospital. The identity of the school was sunk in that of the hospital, so that very few people even today think of the nursing school in any way but as the working force of a hospital.

Perhaps it was necessary that we should go through this stage in order that the hospital might be made a fit place in which nurses could be trained. I visited this summer a few private independent schools of nursing in France, Belgium, and Switzerland, where they were trying to secure satisfactory hospital experience for their students in the wards of the public hospitals or those under religious orders. It seemed almost a hopeless proposition, because, although the sick patients were there, the nursing was often about as bad as could be, and the school had no power or authority to change it or even sometimes to follow its own students into the hospital wards. The unwholesome moral and sanitary conditions in some of those hospitals were a menace to students, and yet nothing could be done without some kind of effective control over the nursing service.

In British and American hospitals, the nursing service of the hospital and the direction of the nursing school are under one head, and whatever teaching or supervision is done has been carried on in the main by the regular nursing and medical staff of the hospital.

Results of the Present System: This plan has worked out remarkably well—for the hospital. With properly graded duties and good supervision, there is no doubt that student nurses can be organized into an efficient working corps, and even with a limited amount of teaching thrown in, the cost to the hospital is substantially less than that of any other group of workers which could be secured. Under this system the worst conditions in hospitals have been cleaned up and hospitals have flourished and multiplied. Eighteen hundred hospitals in the United States now conduct nursing schools. They range all the way from about 10 to 2,000 beds or more, including every kind of special hospital, with a total enrollment of 55,000 student workers. Even small private commercial hospitals are maintaining themselves and drawing substantial dividends from the unpaid service of student nurses.

But from the standpoint of the nursing school the results have not been so satisfactory. It is true that the better hospitals with varied clinical faculties have supplied the school with an unequalled practice field. But the difficult thing is to extract the educational value out of it, and at the same time to meet all the continuous and insistent demands of the hospital for nursing service. The school of nursing exists presumably for the purpose of giving its students a proper training in nursing. The hospital exists for the care of the sick, and it is certainly the hospital's first duty to see that those sick people are well cared for. The whole question is whether the school can be made to stretch over all the nursing demands of the hospital without seriously compromising its claims as an educational institution or endangering the welfare of the sick, or both.

In order to master the nursing art, the student must care for and observe all kinds and conditions of patients, must carry real responsibility, meet real emergencies. But does it follow that every patient must be cared for by students and every emergency met by them? Is it necessary that they should work longer hours than any husky man in industry and then have to tuck into their hours for rest and recreation the pitifully meagre amount of class work allowed them? Is it essential to their preparation as nurses that they should

do quite so much of the housework of the hospital? Even in the nursing work proper, there is a great deal of energy and time spent in tasks that are relatively unproductive educationally. Some of us have scrubbed literally thousands of instruments in the operating room, mended hundreds of rubber gloves, done up bales of surgical supplies, —all as a part of our training. It is not that one minds doing these things; certainly they have to be done and done well and I refuse to call them drudgery. But after they have been well learned, what is the value in their continuous repetition during training apart from the economic value to the hospital? Is it fair to require the student to spend one-fourth to one-fifth of her time in work of this character?

Examples could be multiplied of the ways in which these economic needs and limitations of the hospital and sometimes, I might add the requirements of the medical school, have cut into the very moderate educational standards the nursing school has tried to build up. A Scotch friend was telling me recently of a mother who had taken her two young girls out of school and sent them to work in order that the son might be put through medical college. She ended with a pithy Scotch saying, "She's one of those mothers that would bile her girls to make soup for her boys." I am not going to draw the deadly parallel or accuse any special group of sharing in these cannibalistic rites. We have all been responsible and we have been singularly blind to the real injustice of the situation. I am sure most of the exploitation has been unconscious, however, and not intentional. It is the system that has been largely to blame.

The astonishing thing is that under these conditions so much should have been accomplished along educational lines. Great credit should be given to those over-worked and much-criticised women, the superintendents of nurses, who have persistently struggled to find some way of satisfying the hospitals' demands for nursing service and at the same time doing anything like justice to the schools which are placed in their charge. The students in those schools do not pay cash fees as a rule, but they do pay the equivalent of the highest fees of any professional school I know. I have seen many girls work their way through college, and I have never seen any of them work harder than nurses do for their education. Much of this work will always be necessary. Much of it they enjoy. Indeed, there has been little protest, because we have usually been able to convince them that it is all essential for their training. But is this true? Is the training we give just what they need for their life work? That is the greatest difficulty of all.

Newer Requirements of Today: In the older days there were fewer demands on the graduates of our nursing schools. Any nurse who could take reasonably good care of a sick patient was considered a pretty satisfactory nurse—and that in itself is "some job." But there are thirty or more distinct branches of work open to the nurse who graduates today, and the demands are getting more and more varied and exacting.

Of the 150,000 professional nurses in the field there are probably about 12,000 in various kinds of public health work, about the same number in hospital positions, and the bulk of the remainder in private nursing. Nurses in public health work have more than doubled within the last ten years and it is evident that the trend of the present time is in that direction. Dr. Osler said once to a group of nurses: "If I were a woman (and sometimes I wish I were) I would be a visiting nurse." Evidently many of our members agree with him.

In spite of the fact that nurses have undoubtedly made good in public health work, they themselves and the people who employ them often find great gaps in their preparation. Unless these are patched up through some kind of supplementary training, the worker is badly crippled and the public suffers the loss. The same kind of deficiencies are found among private nurses and those who go into educational and executive work in hospitals. The scientific foundation is often shockingly weak. There is a very inadequate preparation even in such essentials as nutrition and child hygiene. All the operating room technique in the world won't make up to the public health nurse for her weakness in communicable disease or in sanitary science. The social and preventive side of nursing work has been almost untouched in most nursing schools. Of course, specialization may reasonably be expected to come after graduation, but it should not be necessary, as it now is in many of our post graduate courses, to go back and fill in great blocks of experience and knowledge which should have gone into the foundation.

Necessary Improvement: There is another phase of the whole subject which is causing a good deal of dissatisfaction and some bitterness among those of the younger generation. It is a delicate subject to discuss before a medical audience, but nurses must accept equal responsibility for whatever faults there may be in our system of discipline. We have all accepted the traditions of military discipline and, older still, the monastic tradition of subservience and unquestioning obedience,

without realizing how sharply these are coming into conflict with the principles of democracy in which our young people have been reared, and the fundamental principles of modern education.

I know all the arguments for military discipline, and there *are* emergencies when unquestioning obedience is necessary, but the question is whether in the daily work of the wards better results are not achieved for the patient and all concerned when emphasis is put rather on intelligent coöperation and good team work. Autocracy as a system does not seem to bring the best out of the autocrat or the subject. Indeed, as we all know, it tends to act as a boomerang and turns the subject into a petty autocrat whenever the pressure is released. We have no lack of examples of this in hospital work.

Students of the present generation are apt to be very critical of the older type of discipline with its needless humiliations and repressions, especially when we try to justify it by insisting that it is necessary for their education. Education means growth, not suppression. Someone has recently said that the difference between training and education is that training prepares you to fit into a fixed and unchanging order, but education is required to give the power of adjustment to new and changing conditions. Anything which tends to curb too much the powers and normal instincts of the individual, not only prevents adjustment and stunts growth, but brews in the chemistry of the soul toxic bitternesses and resentments which may poison many lives.

There seems to be some fear that if the curb is removed from the nurse's mind, she will stray too far out of her own sphere and might perhaps attempt to compete with the physician. I do not think there is the slightest foundation for this fear. We do not think of nursing as a half-way house to medicine. They are really not on the same track, though they are in the same general territory. But nursing has its own attractions and leads into wide fields of opportunity which from the standpoint of social values are probably as rewarding and satisfying as those found even in the great field of medicine.

The student nurse of today wants recognition for that field, and freedom to develop in it. She is just like other people in her desire to be treated as an individual and not as an automaton, as a student and co-worker and not as an inferior. She needs a wholesome, normal life in order to develop her best qualities and give her best service. She is willing to accept hard work, but she wants to be pretty sure that she is going to get a reasonably complete and satisfactory education when she is through. She does not want to spend three or even two years for half a training.

There are hundreds of bright eager young women who are interested in nursing today, but unless our schools can remove some of their present handicaps and meet some of these newer demands, we need not be surprised if they fail to compete with all the other schools and colleges which are attracting young women by the thousands. The great question is whether we can make our present system measure up to these modern demands. If we study the history of other vocations we shall find that this crisis which we are meeting in nursing has been met in practically all those professions and callings which have followed the apprenticeship system of training. In such a system production is always the primary and controlling factor and education will always be subsidiary. What has been done in law, in medicine, in engineering, in teaching, in commercial occupations, and scores of other vocations must somehow be done in nursing. We must get rid of the old apprenticeship system though not, by any means, of the whole system of training which in many respects is sound. In a recent book on vocational education, Dr. Snedden holds nursing up as the best example of an educational system which has escaped from the bookish, academic, and unpractical stage of development which most professions have gone through. We shall want to avoid swinging to that extreme, but there seems little real danger of that so long as the proportion of theory to practice in most of our schools is still 1 to 20, and even in the best not more than about 1 to 10, while the accepted standard in practically all other recognized types of vocational schools is about half and half, or 1 of theory to 2 or 3 of practice at the most.

The main thing is to get the school of nursing on its own feet where Miss Nightingale placed it 50 years ago. It must have money enough to carry on its educational work. It must have a board whose primary interest is the education of those students, not their economic value. It must have a faculty and educational equipment, and its work, both theoretical and practical, must be arranged to meet the present and future needs of those students. The hospital will still be the main practice field, though there may be others. But the hospital will have to find some way of employing regular paid workers for some of its nursing work, as it does for its clerical work, for its kitchen staff, and much of its technical work.

Report of the Committee for the Study of Nursing Education: This whole question has been thoroughly discussed in the recent report of the Com-

mittee for the Study of Nursing Education in the United States, which as you know was composed of outstanding physicians and nurses with other experts in public health and social work. This report of nearly 600 pages tells us very little that we have not known before, but it presents an impressive array of facts on which its conclusions have been based. These conclusions have been widely published and discussed. I shall not take time to say much about them here, except that the report answers quite definitely the questions which have been sometimes raised about the over-training of nurses, and shows that nurses in this country are by no means too well prepared for the duties and responsibilities which they have to assume. Nor can it be said that the educational requirements for admission to nursing schools is too high, when in 60 per cent of the 1,800 schools in America the requirement is one year of high school or less. The trouble is that the crying need of the hospitals for workers has brought into our school a great deal of mediocre material which the best system of education in the world could not convert into efficient nurses.

The Rockefeller report strongly recommends a sounder preliminary education, four years of high school being agreed upon as the minimum educational equipment for those entering nursing schools. It urges more teachers and supervisors for nursing schools and a better preparation for these responsible educational positions. It recommends that specialization along the lines of teaching and administration, both in hospital and public health work, should be given after the basic nursing training has been completed. In regard to the shortening of the period of training, members of the committee believe that with a higher standard of preliminary education, with the elimination of much of the non-educational hospital routine, with more hours devoted to teaching, with better teaching and supervision, and with the postponement of specialization until after graduation, it is possible to reduce the present three-year course of study to about two years and four months, and still get better results than we are getting today. But it is generally agreed that reduction in time *without* these accompanying improvements will not improve matters.

It is believed by the Committee that there is room for a subsidiary group of workers, who are not nurses, but rather attendants or aids, and who may be prepared for the care of chronic or convalescent patients. This group we already have with us, but there has been great difficulty in getting any accepted standard for their duties or preparation. Nurses are struggling with the problem, and they need your coöperation and that of the public in getting this service put on a safe basis and one that will be fair to the patient and the professional nurse as well as to the worker of more limited qualifications and training.

Most of these conclusions of the Committee have been endorsed by the nurses' associations of this country. The Committee on Nursing of the American Medical Association, which recently presented a report, follows much the same lines in its criticisms and recommendations.

Some Further Developments: Another development, which has come in other fields of vocational education and which is beginning to be seen in nursing, is the transfer of training from private agencies and private control to public agencies and public control. Does it not seem a little strange that schools for teachers and agricultural students and military officers and all kinds of professional and business workers should be endowed and supported by the state, and that nursing schools, which supply thousands of nurses for the public service, should have almost no independent endowment, and no state assistance apart from what goes to support state or city hospitals?

In the last few years we have had three substantial endowments for nursing schools, in Columbia, Western Reserve, and Yale Universities. In all, over twenty universities are maintaining undergraduate or postgraduate departments of nursing education in the United States and Canada. There is no doubt that things are moving in this direction. The university undergraduate school has not yet been completely worked out, but it has come to stay. It will not train all nurses by any means, but it will be freer to experiment and lead the way toward a more flexible and a better educational scheme which will undoubtedly influence all schools.

Another tendency which has been marked in the development of medical and other professional schools is the tendency toward consolidation. This movement is just beginning in nursing schools. In Minneapolis and Cleveland, groups of hospital schools are uniting under university auspices. In Philadelphia, Rochester, N. Y., Kansas City, Toronto, and a few other cities, groups of schools are combining and tying up in some cases with Junior colleges to carry on some of their educational work.

Finally, we are beginning to feel the influence of that movement toward standardization which has helped to weed out or to galvanize with life a lot of weak colleges and secondary schools, and which has recently been used effectively by the American Medical Association and by your or-

ganization, in improving conditions in hospitals and medical schools.

Standardization of Nursing Schools: I have been asked to say a few words especially on the subject of standardization in nursing schools. I am not sure that I like the term "standardization" very much. It seems to suggest Ford plants and ready-mades and those ugly monotonous rows of frame houses which one sees sometimes in our suburbs. It is probably this idea of uniform mediocrity which so inflames President Eliot when he launches out in his recent tirade against "the blight of standardization" in education.

But I think we will all agree that something is needed to clear up the confusion of standards in nursing schools, which are more diverse and individual in their content and methods than any other type of professional schools at the present time. Though it would be as undesirable as it is impossible to reduce all of these to anything like uniformity, it would help a lot if we could have some system of grading or classification which would give recognition to schools doing a higher grade of work, and supply a stimulus of competition and publicity to the schools doing poor work. Such a classification would also enable the prospective student to distinguish in some measure between the school of good standing and the poor school. At the present time she has no guide beyond the list of registered schools in various states, and this only gives assurance that the school meets the *minimum* requirements of the state, which may mean a very low standard.

The grading of hospitals does not help much; indeed, it may lead to a good deal of confusion where the student accepts the hospital grade A as a guarantee of grade A training in nursing. We all know that a hospital may have a good plant, may be well organized and do good medical work, and yet it may be a poor place in which to train nurses. Furthermore, requirements for training medical students may be pretty well met by the hospital and yet the nursing school may be poor. A separate classification is necessary, based on the accepted standards of a good nursing education. These should not be set so high as to discourage reasonably good schools, but we should fail in our effort if we set the standard too low.

Any scheme of this type should undoubtedly be operated on a national basis and by a committee of recognized experts representing the groups which are most directly concerned. Such a plan has already been proposed and has met with a very gratifying response from all the larger national medical, hospital, and nursing associations in the United States. It is hoped that Canadian associations may wish to coöperate also when the details of the plan have been worked out, which should be in the next few months. If this joint undertaking does nothing more than to promote a closer acquaintance and a better understanding between hospital, medical and nursing bodies, it will be well worth while, but we are hoping for much larger results which will directly benefit all of us and chiefly *the public* whom we all serve.

Conclusion: I started out in this paper with the intention of being exceedingly diplomatic and discreet and I find that I have betrayed all the Bolshevistic schemes which the worst radicals in the nursing profession have been able to concoct. You may judge for yourselves how dangerous we are. If it is any comfort to you, I may admit that there are just about as many good old dyed-in-the-wool conservatives in our ranks as there are in yours, so you may rest assured that there will be no revolution tomorrow.

Seriously, however, I do want to ask your interest and coöperation in the whole question of better nursing education. We need you very much. I was talking to a nurse the other day and I asked her why she had gone into nursing. "Why," she said, "I am a doctor's daughter, and I couldn't help it. It runs in the blood." However, like every other doctor's daughter I have met in nursing (and there are hundreds of them), she got little encouragement from her father when she went into training. I will not volunteer statistics, but I venture a guess that 90 per cent of us were warned and urged, not only by our parents, but by our medical friends and brothers, to keep out of nursing; yet we went into it and loved it in spite of everything. More than that, we believe in it absolutely and we are not going to die, I hope, until we can build up a system of education which is worthy of one of the finest professions in the world. Will you not give up trying to discourage us from going into nursing and help us instead to make nursing schools "safe for democracy" and fit for the education of your daughters, your sisters, and the thousands of splendid young women who are to be your colleagues and assistants in the future?

PRESIDENT CUSHING: I shall now ask Miss Browne to speak for the Canadian National Association of Trained Nurses.

MISS JEAN E. BROWNE: I wish to thank you, first of all, for your gracious invitation to take part in the program of this Conference. I am fully aware of the prestige of this great medical organization which is international in scope. For this reason, I am rather overwhelmed with the honor you have done to the nursing profes-

sion in Canada by asking me to appear on this platform.

Since I have been given fifteen minutes in which to present to you a *Review of the Status of the Nursing Profession in Canada, with Possible Future Developments*, I shall have to condense my story at every point. The beginning of nursing as a profession is of comparatively recent date in Canada as elsewhere. The Toronto General Hospital established the first training school for nurses in 1881, and in 1890 the Montreal General Hospital established its training school.

There are now in Canada 204 recognized training schools for nurses. Of these, 178 are connected with general hospitals and 26 with special hospitals, affiliated with other hospitals in such a way as to provide training in all essential departments for the students.

In some of our provinces, even before the passing of Registration Acts, there was some restriction regarding the conducting of training schools in hospitals receiving government aid. In most of the provinces, however, there was no restriction whatever, and almost any kind of hospital could set up a training school for nurses. Until the passing of Registration Acts, therefore, the only restriction in many parts of Canada was the fact that graduates of certain of these so-called training schools were denied admission to the provincial associations of graduate nurses. Each province drafted its own requirements.

Now every province in Canada has a Registration Act for nurses. Either in the Act or by-laws, certain requirements are fixed by law for the training schools, the graduates of which are eligible for registration or are admitted to the examinations for registration. No two Acts are the same. Approximately, however, the requirements are a three years' course of training in caring for men, women, and children together with theoretical and practical instruction in medical, surgical, and obstetrical nursing, either in general hospitals with a minimum daily average of twenty-five patients or in special hospitals that have secured suitable affiliation, providing experience in all the essential branches of nursing. As a matter of fact, the average number of beds in hospitals conducting training schools in Canada is 143.

The Province of Ontario has government inspection of training schools, the appointee being a registered nurse. It is hoped this step will soon be taken by the other provinces. This will lead to a standardized curriculum and standardized methods of teaching in the province at least. The basis of inspection in Ontario is:

(1) Number of beds in the hospital—minimum daily average of 25. (2) Facilities to provide experience in all essential branches of nursing, either in the hospital or through affiliation. (3) Ratio of patients to nurse—at least three registered nurses on permanent staff—two on duty in day time, one at night. (4) Suitable class-room equipment. (5) Record of students' work. (6) Residence accommodation. (7) Students' welfare—including health and social life. (8) Schedule of class work and lecture course—standard curriculum. (9) Nursing technique.

Apart from these restrictions, each training school is a law unto itself with final authority vested in the Hospital Board. The members of a Hospital Board are, or should be, public-spirited men or women with business ability. It has not always followed that the members of the Board have had the vision to direct wisely the educational policies of a training school. What has undoubtedly happened in many cases is that the training school has been exploited in order to provide a cheap means of running the hospital. On the one hand, student nurses are required to perform tasks which should be done by ward maids and, on the other hand, they are entrusted with responsibilities in some particular service for long periods of time which ought to be undertaken by graduates.

The quality of instruction given in the training schools varies. In the large general hospital connected with a university, the lectures in medicine, surgery, obstetrics, gynecology, and nervous diseases, are given by the members of the Faculty of the School of Medicine.

A plan of centralized lectures given by members of the University staff has been worked out in Toronto:

In Toronto there are eleven training schools for nurses, ranging in size from 12 to 250 enrolled students. In 1917, owing to conditions brought about by the war, the superintendents of nurses of the Toronto hospitals decided that if the standard of the training of nurses was to be maintained it would be necessary to conserve the time of the few available physicians left to carry on the lecture course. A committee was organized, consisting of the superintendents of nurses of the various schools. It is responsible for the arrangement of the entire course. The appointment of the lecturers is left to the medical faculty of the University. As none of the schools had a class-room sufficiently large to accommodate the students, the University of Toronto was

approached and a class-room in the Medical Building was provided. The University, while extending this courtesy to the training schools of the city each year, has no connection with the lecture course, beyond the unofficial appointment of these lecturers by the medical faculty.

In addition to this arrangement a course in chemistry especially designed for nurses has been arranged and given by the Central Technical School of the city. This course covers a period of three months, with one hour class and one hour laboratory work weekly. The examination in chemistry is given by the staff of the Central Technical School, and the examination papers on physicians' lectures are set by the lecturer and read by an examining committee appointed by the training schools. The examinations are written and are held in the various schools at the same hour.

The advantages of such a centralized course are, I think, apparent. It does however necessitate some disorganization of the hospital service because of the much longer periods the student nurses are required to be away from the wards and on account of time consumed in traveling to and from the University.

The nursing subjects are given by a member of the training school staff. Special nurse instructors are now generally engaged for this purpose, and probationers are given a series of demonstrations and instruction, usually varying from a period of two to six months, before they are allowed to go on ward duty. It is the work of the instructor, also, to follow up the work of the nurses on the wards in coöperation with the head nurses. The weakness that still exists, in my opinion, is that only a small percentage of these instructors have received a sufficiently thorough training in the general principles of teaching.

I regret to say that there is no national standardized training school curriculum in Canada. Nurses' organizations have been working on this problem for some time, and it begins to look as if this particular "possibility" would soon be realized. I think few people realize how much Canada is affected by the principle of "provincial autonomy." It is a deeply ingrained political principle, and enters into every consideration of a national undertaking. Then, too, the geographical conditions are such that in some provinces we have sparsely settled and comparatively isolated rural communities. The whole hospital problem in such parts must be entirely different from that in urban centers. I am mentioning these facts to explain why a scheme of standardization has to be approached with great caution and wisdom.

Some of the training schools in Canada have been providing an approximate period of two months in extra-mural work for their students. This first took the form of experience in bedside nursing in the homes, arranged, either through the courtesy of the Victorian Order of Nurses or through a local Nursing Mission. A later development is the arrangement whereby a limited number of students during their final year may take a two months' course in Social Service or Public Health Nursing. The lectures are given at the Social Science Department of the University and the field work is provided through municipal public health agencies.

Since the war, five universities in Canada have established a year's post-graduate course in Public Health Nursing. These are the University of British Columbia, University of Toronto, Western, McGill, and Dalhousie. In addition, McGill gives a year's post-graduate course for training-school instructors and administrators. The University of British Columbia has had the vision and courage to establish a course of five years, leading up to a degree of science in nursing. The first two years are spent in the University in a combined course of Arts and Science, the next two in the training school of the Vancouver General Hospital, and the fifth year is elective in either public health or hospital administration.

While our efforts in Canada have been directed to giving the student nurse a more scientific training than used to be thought possible, the superintendents of our training schools have been vigilant in safeguarding the art of nursing. We don't want our Canadian nurses to lose that essential quality of devotion to the interests of the patient. It is because of this that the education of nurses must differ from the education of other students. In colleges and universities the education of the student is the only consideration; in hospital training schools, the education of the nurse is secondary to the welfare of the patients. This is our most baffling problem.

There is a whisper of criticism, heard only occasionally in high places, that the product of the more scientific training is not as competent as her predecessors. I do not think the time is ripe for a just appraisal, and when that appraisal is made, many factors will have to be taken into consideration. It must be remembered that the young woman of today is vastly different from the young woman of even a decade ago. Opinions differ as to the relative merits. We must bear in mind that a nurse who graduates from a training

school can take out of it only in proportion to what she brought into it. Character may be intensified but not completely changed in a training school. When our people as a whole are more imbued with humanitarian ideals and the desire for unselfish public service, the whisper of criticism of the modern nurse will no doubt disappear. In the meantime, in the interests of humanity, the scientific training which teaches a nurse how to observe, what to observe and how to express accurately her observations must be continued and improved. The pessimistic critics of modern nursing education would almost have us believe that a dull or passive mentality combined with obedience and devotion is the ideal for a nurse. We must never forget that in a living ideal of service there must be an intellectual element to keep it fresh and free.

The advent of the public health nurse has marked an epoch in the nursing profession. Her work is to interpret the great discoveries of medical science to the masses of the people who in their ignorance become the victims of avoidable disease. Her function is to teach personal hygiene. She has been accorded an important place in preventive medicine in Canada.

The care of the sick is as important today as ever it was, but the greater problem of removing the causes of disease has forced itself upon the public consciousness; hence the training of medical students in preventive medicine and the training of student nurses in various aspects of public health has become necessary.

The scope of the duties of the public health nurse varies. The fields of generalized and specialized public health nursing are fairly equally divided. The provincial and municipal departments that have adopted a system of generalized public health nursing, do not include bedside nursing. A well-known voluntary organization, the Victorian Order of Nurses, makes bedside district nursing, particularly obstetrical work, its first consideration, and in the smaller centers of population, the Victorian Order of Nurses do general public health nursing as well.

In Canada, the necessity of a full general course of hospital training as the first essential for a public health nurse has never been questioned to my knowledge. Since the facilities have been provided, the necessity of post-graduate courses in public health nursing has been stressed. For school nurses, a teacher's training is considered to be an almost indispensable qualification.

An experiment in quite another type of nursing service, that of the nursing-housekeeper, has been tried out in Saskatchewan during the last three years. During the war, public attention was drawn to the scarcity of nurses. On investigation by the Canadian National Association of Trained Nurses, it was found that there had never been adequate nursing service for the sparsely settled rural parts of our country. Private duty nurses very naturally remained in the cities where they had been trained, and where they usually had continuous work. The result was that most of the care of the sick in outlying rural communities was supplied by kind-hearted but ignorant and untrained women, some of them making a living by it, others doing it in a neighborly spirit. Based on this evidence, the Canadian National Association of Trained Nurses, at its annual convention in Vancouver in 1920, passed a resolution approving of the training of a secondary type of nurse. Immediately following this, the Saskatchewan Registered Nurses' Association had their Act amended for the purpose of training and supervising a class of women to be known as nursing housekeepers. There is no age limit for applicants, nor educational requirements demanded; nevertheless a good type of woman has been available. They are given a training of one year in elementary nursing subjects, particularly obstetrics and in the essentials of housekeeping, in the small hospitals which do not conduct training schools for nurses. Three months of this time is spent in the Provincial Sanatorium. They are required to pass examinations and are registered as nursing housekeepers by the Provincial University. They are required to renew their license each year. This can be done only on the recommendation of the supervisor of nursing housekeepers who follows their work closely. They use a special uniform and charge a fee of $3.00 a day. The experiment has been on a small scale, as there are only ten institutions available for conducting the training. Twenty-three students have been graduated, ten are in training, and twenty will be received into the 1924 class. Half of the number who have been graduated have returned to the rural districts from which they came and are engaged in caring for the sick. The rest are engaged in small institutions such as the Red Cross outposts and small municipal hospitals. In no case are they competing with registered nurses, but rather they are filling a field hitherto entirely neglected or occupied by the completely untrained so-called practical nurse.

I think the status of military nursing in Canada is quite well known. At the beginning of the World War, the Canadian Army Medical Corps nurses were given military rank at once. The

nursing sisters were given the rank of lieutenant, the matrons that of captain, and the matron-in-chief was made a major. I believe it is universally acknowledged that Canadian nurses overseas were characterized by their resourcefulness in emergencies, and by their devotion to duty at all times.

So much for what is past. The big tasks of the present are:

(1) The working out on a more extensive scale of wise schemes of affiliation between general hospital and special hospital training-schools. (2) A more extensive training of nursing housekeepers to supplement the work of the registered nurse in our rural areas. (3) The standardizing of training-schools and training-school curricula.

I am not prepared to prophesy as to whether the three years' general training for all types of nursing will be continued. There has been considerable discussion on this point, but the profession as a whole has not arrived at any conclusion.

I may be unduly optimistic, but the "future possibility" which seems imminent to me, is that women of the most brilliant intellect who keenly desire to serve will find scope for their gifts and a channel for the highest service in some branch of the nursing profession. The exploiting of the student nurse by hospital boards will, I believe, soon cease and as much care as possible be given to the scientific education of the students. At the same time, prospective student nurses will have it made quite clear to them that the first charge of any hospital is the care of the patients, and that some sacrifice is demanded of the students in a hospital training-school for that very reason.

I have dealt throughout with a profession, but I feel I cannot conclude without attempting to give you a picture of the nurse herself at her best. She is a woman physically strong and mentally alert who thinks clearly and observes accurately; her sympathies are tender, and at the same time purposeful; her response to routine duties is competency and to emergencies, initiative and resourcefulness. To all these qualities is added the lovely virtue—Courage—through which not only her own life is made beautiful, but by means of which she inspires those to whom she ministers.

PRESIDENT CUSHING: It has been a very great privilege to have listened to these two papers. I wish we might have the opportunity of pursuing them by asking questions of those who have given these interesting points of view regarding the nursing profession in which we as physicians are, of course, so vitally interested.

I see that Father Moulinier has come in. He was to have preceded these three speakers we have just heard and to speak on *Hospital Standardization and the Medical and Nursing Professions*. I will ask him if he will say a few words at this time.

REV. C. B. MOULINIER: Mr. Chairman, Sisters, Ladies and Gentlemen: You must blame the Pennsylvania System for my not being here on time. As I stand here before you I find myself thinking in a circle. I go back to the initial meeting that was held in this building some five years ago, and I find myself saying within my soul what I said then, for it is true today. I then said to the members of the American College of Surgeons and to a larger gathering of people interested in hospitals, that to standardize the hospitals meant to standardize first the medical profession, next the nursing profession, then the hospital profession, and, finally, the public mind. That is just as true, I think, as anything I ever said. I feel convinced more and more of the truth of those words today after having spent all my time and all my energy in advocating the minimum standard of the American College of Surgeons all these years.

That minimum standard, as I have repeatedly said, and as I find everybody is beginning to say and think, is minimum only in the number and externalness of its requirements; it is absolutely maximum in its meaning, in its force, in its reach, and in its moral foundations.

I hope to say just a few words on the moral foundations of the minimum standard. The minimum standard was based, in the minds of those who made it and in their deepest souls, on the great fundamental quality or virtue of justice—justice to the patients, justice to the medical profession, justice to the nursing profession, and justice to the hospital. What does justice mean? Fair play, giving every one his due; that is all it is. We sometimes like to call it American virtue, but it is a human virtue; it is a virtue that the Almighty God has put into human souls; it is the virtue the love of which has brought about civilization; it is the virtue the strength of which makes men, women, communities, nations, strong and ready to meet any emergency. Why is this so important a point to come back to and to reinforce? Why will it always be necessary to reinforce it? Because of the tremendous personal and group interests, institutional interests, in the matter of caring for the sick that are apt to dominate, apt to grow strong. Men have to have

wise minds, balanced minds, balanced characters; they have to have wisdom to administer justice in so complex an institution as a hospital, in so complex a practice as the medical and nursing professions in their science and their art.

But there must be besides wisdom something else. We may see the truth, we may appreciate it, and yet personal interest may come in to blind us, to swerve us, to set us wrong on some great fundamentals. Why, all over the country in dozens, yes in hundreds, of hospitals you have medical men who scoff at records. In almost all of the hospitals you have staffs that make a humbug of the monthly conference. Why do they scoff at records? Why do they make a mere show of the monthly conferences? Because they do not love justice enough; they do not love scientific truth enough; they are not big enough and brave enough to search for the facts and then meet them, face them, no matter what the consequences to self or to group or to institutions may be.

Where has great medicine been achieved, great practice for the patient? Where has thorough and complete diagnosis been brought about? Where you have great men or great groups of men and associated with them equally great women as nurses and hospital managers. You can't find great service to the patient in medicine except where you have great minds and great characters. Minds are less than characters; and, again I want to say this whole movement is a moral movement, it is a movement that appeals to the mind and appeals to the character; it is the will to do right.

Six years we have been at it. Wonders have been achieved, but it would be all over by this time if all of the medical profession and the nursing profession and the hospital people and the boards of trustees had as big minds and characters as they have hearts. Their hearts are swayed, big as they are (in all the professions it is true), too much by personal interest, personal points of view.

Therefore, my last word is this: If what I have said is true, that this movement is at its very root and foundation a moral movement for justice, for truth, for fair play, then it demands strong characters to put it through everywhere. The petty man, the petty woman, cannot, because of lack of fiber of soul, put through a standard that is called minimum. You can't organize right, you can't have right records, you can't have a checking up of those records, you can't eradicate that abominable practice of splitting fees unless there is strength of character; and intimately allied with strength of character there must be self-control, self-control first and foremost, perhaps, in the matter of financial gain. There is too much greed everywhere today, we know. In the professions, no matter what they are, the charge of greed is the most serious charge that can be made, because a profession by its very nature, by its long centuries of inheritance, is a profession of service first of all, otherwise it doesn't deserve the name, and service means that compensation is secondary, in the third place, perhaps often in the last place. I submit, is compensation in the last place with the medical profession, with the nursing profession, with the hospital profession? It must be. And the public must be made to realize that the professions that serve them in the matter of their health earn a thousand times more than they can ever pay them, but the professions must be careful not to be actuated by any primary motive of greed or gain. I know absolutely, gentlemen, that those places where standardization has met with opposition are places where greed dominates the medical profession, in some cases the nursing profession, in some cases, I am sorry to say, the hospital profession, and even in other cases the profession of the clergy at times, admitted with regret.

I submit that nothing great in history has ever been accomplished without these moral virtues, working out in the lives of the individuals and of the groups. There must be a love of justice and fair play based on truth; there must be a wisdom dominating all; there must be a strength back of it all, and a moderating of self and of selfish interests.

If the medical profession or the surgical division for a year gave their services free, there would be no problem in standardization, there would be no fee-splitting, of course, and there would be no eagerness and aim to get money on the part of the individuals or groups.

I could say these words to the clergy, I could say these words to the lawyers, to the engineers, to big business men just as well, and it is true for them; but what I want to emphasize, gentlemen, is, if you will look back into history you will find that no great movement was ever brought about in any profession (and this is the greatest, I think, recorded in the history of the professions of medicine, and of nursing, and of hospitals), and no movement was ever brought to success except on those qualities that make great men and women—love of truth and justice and wisdom and strength and moderation, temperance, governing self, and letting others,

influenced by the same motive, govern themselves, and we wouldn't have to have so much trying to govern others.

PRESIDENT CUSHING: This meeting has gone on at length. It grows better as it goes on.

There is one more speaker, and I hope that you will all remain to hear Mr. Jolly, who will close the morning's list of speakers. Mr. Robert Jolly, of Houston, Texas, Superintendent of the Baptist Hospital, will speak on *The Care of the patient in the Standardized versus the Non-Standardized Hospital.*

MR. ROBERT JOLLY: Mr. President, Ladies and Gentlemen: If I could change a lot of things in this old world I'm sure I would do it. I am a bachelor and I have tried to change a lot of things, but I have found out you can't run things like you want to. If I were running this country I would trade off the Philippines for Ireland. I think this country has gotten big enough to raise its own policemen, but I can't change it. I asked Dr. Martin to let me off at the end of this program, but he said "nothing doing"; so I am going to stay with you for fifteen minutes. You are all visiting here, anyway, you have no patients waiting for you, so you might as well stay here.

A negro went by our jail in Houston the other day, and he pulled out his watch as he went by. Another negro was looking out through the bars. He hailed the other fellow and said, "Hey! What time you got down there?"

"What difference does it make to you? You ain't gwine nowhere." So you fellows stay with me about fifteen minutes, you ain't gwine nowhere. I meant that for the ladies, too.

"The care of the patient in the standardized hospital versus the non-standardized hospital." What is the difference? I'll tell you what the difference is. The difference in the care of a patient in a standardized hospital and a non-standardized hospital is the difference in the feeling that a fellow had fifty years ago when he rode on an old rickety chair car on a narrow-gauge railroad and what he has today when he rides on a steel Pullman on a Chicago & Alton train coming to this Convention. The difference between a standardized hospital and a non-standardized hospital is the difference that you experience today when you see the fire wagons go by here and remember that fifty years ago they had to pull them by hand and some of you fellows were the ones that pulled them; today they go by motor and throw 2,000 gallons of water on the fire when they get there. The difference between these two hospitals today is the difference you would find if you had to register at the Salvation Army headquarters tonight and you got a cot and some place to wash your face in the morning, and you come to this fine hostelry and get the nice room and care that goes with it. It is the difference between falling into the hands of a doctor who has paid $10.00 for his diploma, as they have been doing over in St. Louis to an alleged professor, and being treated by a fellow who got his diploma after five years of hard work out at Northwestern. If you please, it is the difference between a broken and a bruised and a ruined body sometimes, and a fine, upright, stalwart body that is able to do its work. If you please, it is the difference between life and death in many instances, and that is all the difference in the world.

If it is all right to standardize other things, it is all right to standardize a hospital. We have standardized everything. The women say they have standardized women; if you can standardize them you can standardize anything.

I maintain that it is more important to standardize a hospital than it is to standardize any other institution in the country. You yourselves go there and the folks you think most of go there and they have to be treated, and certainly they ought to have every protection in the world thrown around them while they are there.

What happens in a standardized hospital that does not happen in a non-standardized hospital? The first thing is the admittance. (When I say non-standardized hospital, I am not talking about you folks that are not yet standardized but are doing your dead level best to be standardized; I am talking about the folks that don't care about it and have made no effort to get there.) When you go to a non-standardized hospital and are admitted, there are just three or four facts that they care about knowing. First, your name; next, your address; next, what doctor is going to treat you and who is going to pay the bill; and last, what undertaker you want. But when you go to a standardized hospital there are a number of things different from those, which they want to know. There are two things, for instance, that you have to have. One is a physical examination and a personal history. I know a lot of folks who kick about that sort of thing. You have had them kick in your hospital, haven't you? We have had them kick in our hospital. They keep on kicking; they don't understand that. I have had them send for me and say, "What on earth do you want to get all that information for? I didn't come here to have my kin-folks treated. I came here to be treated myself." A woman called me in the other day and said, "I didn't come

down here to have my biography written; I came down here to get treated."

That is one of the things we have to contend with; we have to explain to these people that because of the fact they are in a standardized hospital we must have this information, and have it down in black and white; that the doctors need it and the hospital needs it, and there is no camouflaging or no fudging. This thing must be there and it must be there before they even go to the operating room; it must be there before anything happens to them. Of course, a lot of you doctors act as if you did not believe that. You fellows have the most wonderful "forgetters" I ever knew of. You say, "Oh, if you will let that patient come in I've got all that information at the office and I'll send it right away"; and we go after you for three weeks to get that data and you forget it every day and every day and every day, and sometimes we say, "Here's a slip, put this down now, we can't wait any longer," and it's the funniest thing to me how you fellows can sit down three weeks later and remember the blood count and the urinalysis of a half dozen patients and write it down lickety-split and say it's all right. Everybody here that believes those fellows can remember all that, hold up your hand. I know you can't do it; and I have found it out. I tried to be nice to these doctors for a while, and I am still nice to them, but they can go just so far.

Here's another thing we have to have. When a patient comes in, there must be the urinalysis and the blood count. That is a hard thing to get. Folks shy off from that sort of thing if they don't know what you are up to. They don't think you need that. They say, "The doctor knows all about me. He has that information in his office." But what good is that going to do the hospital records if the doctor didn't send it down with the patient?

One of the best surgeons that I know in a certain town came in with an emergency case and operated, and the next day the patient died. He moped around three or four days and finally said to the superintendent: "You know, if I had known then what I know now I wouldn't have operated on that woman."

The superintendent said, "Doctor, you should have found that out," and he should. He is not the only one, either. Folks don't understand that, but it means all the difference in the world to the patient to have these examinations made before they go to the operating room.

The other day they called me up to a patient's room. The pathologist was there getting a little dab of blood out of her finger, and she thought it was something awful. She acted as though she thought the doctor was trying to murder her or steal some of her blood. She said, "I was born in Virginia."

I said, "Yes, madam, but that doesn't make any difference to the pathologist. He was born in Arkansas and he thinks his blood is just as good as yours; he's not trying to steal it. I was born in Kentucky and I know mine is as good as yours. We are sending that up for an examination, and it may mean life or death to you." She was all smiles after that, and it was quite all right. Most folks are all right anyway if you stop to explain.

The minimum standard has taught everybody connected with the hospital to stop and explain what these things mean, and the minute you give these folks a little knowledge and a little enlightenment they will go along with you and go a long way toward helping you.

Here also is another thing that marks the difference between the standardized and the non-standardized hospital, namely, the standing of the doctors who are allowed to operate. It makes a lot of difference. Why didn't some of you doctors say something about that? I heard a preacher over here say "Amen." You ought to have said Amen before. We have found out and you have found out and all the rest of us who have standardized our hospitals have found out that we had to get our staff together and get some picked men; that we couldn't let just anybody operate on our patients if we were going to take the responsibility and bear the brunt. If anything goes wrong the hospital is at fault; and we are trying to get the men who operate in our hospital to be the right sort of fellows. We don't have a closed staff in some of our hospitals, but we have almost a closed staff; we pick the men whom our own staff says are all right and are competent to operate in that hospital. That is what standardized hospitals are doing.

I had a woman come in the other day bringing her daughter. She said, "I don't see why in the world Doctor So-and-So can't attend to my daughter. He was present when I was born and he has kept our family going all the way up and I want him to operate." I had never heard of him and I said, "Lady, this is a standardized hospital and we just let surgeons whom we have found to be competent operate here. We can't take the time and the trouble to find out whether he knows how to operate or do this, that, and the other. You select any one of these doctors on this list and we will guarantee that he is all right."

She said, "I just don't understand it. He has taken care of me."

I looked her over and she didn't look to me as if she was perfectly well. I said, "Have you been sick recently?"

"Yes, I had an awful misery in my right side. (We call it misery down South; I don't know what you call it up here.) He cured me from that."

I said, "Don't you feel any returns of it at all?"

"Well, I'm not just exactly all over it, but he cured me."

I said, "You remind me of the fellow I heard on the train the other day," and I told her the story about a stammering fellow who got on the train at Dallas coming to St. Louis to get treated for stammering. There was one vacant seat and he took it. The train went on to Greenville and another fellow got on and took the vacant seat beside the first one. It happened that the fellow who got on at Greenville was a stammerer too. The fellow from Dallas had been riding quite a way, and he was getting so lonesome he had to talk to somebody. He stood it as long as he could, then he reached over and nudged the other fellow and said, "Wh-wh-wh-wh-what t-t-t-t-town is th-th-th-th-this we-we-we-we're coming to?"

The other fellow said, "Wh-wh-wh-wh-why, th-th-th-this is M-M-M-M-M-McAlester."

The other fellow said, "N-n-n-now, y-y-y-you l-l-l-l-look here, d-d d-d-don't y-y-y-y-you g-g-go to m-m-m-m-mocking me," and he hauled off and hit him. They fought for about three minutes, and finally they got quiet and looked at each other as if they were wondering which one was trying to make a fool out of the other. The Greenville fellow summoned up his courage, reached over and nudged the other fellow, and said, "Wh-wh-wh-where y-y-y-you g-g-g-going?"

"Wh-wh-wh-why I-I-I-I'm g-g-g-going to S-s s-s-St. Louis to s-s-s-s-s-see D-d-d-doctor B-b-b-b-brown to g-g-g-get cured of th-th-th-this s-s-s-s-stammering."

The other fellow said, "W-w-w-well, he-he-he's a goo-goo-goo-good d-d-d-d-doctor because he c-c-c-c-cured me."

I said, "Lady, if you are a sample of that doctor's curing, we'd better get another doctor," and we did, and that woman was perfectly satisfied. She took that good-humoredly and got over it all right.

Gentlemen, that is what it means. It means that just anybody in the world can't come into your hospital and operate on your patients if you are going to take the consequences for it. You have to protect yourselves as well as protect those patients.

Here is another thing that a standardized hospital means. It means that not only are those doctors organized into a staff, but it means that there are certain rules and regulations instituted and put into practice there in the hospital; it also means that they have to have their monthly staff meetings that you heard about this morning. I wish you could have seen the one we used to have before our hospital became standardized. It was just like yours used to be. It was just like a woman's sewing circle when they got together. It was like the town I was born in; just three things ever happened in that town—morning, noon, and night. Just three things ever happened in our staff meetings—they were come, sit, and go. But I tell you *now* there is something doing. When our historian sends over a report of the folks who died there, you ought to hear those fellows explain *why* those people died. When the historian reports how many infections there were, you ought to hear them anxiously trying to explain *why* they happened. It is mostly the hospital's fault, as I said.

Our staff meetings are amounting to something now. Those fellows have invited the superintendent of the hospital to come in and meet with them, and they have invited the superintendent of nurses to come in. They have religion pure and simple clear down to their toes now.

I am talking about the same things in your hospitals. The things that happen to us happen to you. I know they do because I see you nodding your heads.

Here is another thing that happens; we have to get those records straight. That is another difference between a standardized and a nonstandardized hospital. I went back the other day and got out all of our old records up to the time that our hospital was standardized and threw them in the furnace. They weren't worth shucks; I was ashamed of them. Sometimes I am ashamed of some of those we file away now, because we are not perfection by any means and we never will be as long as men and women run hospitals and medicine. But some day we will be better; we are getting better and better all the time now, and you are too. The records we are getting now are getting better day by day, and ten years from now when somebody wires to us from Kalamazoo, or some of those places you have got up in the North, to see what happened, we can get out the dope and send it to them and the *stuff* will be there straight. Those things are to help us protect the patient ten years from

now when he goes somewhere else and gets another doctor.

One other thing in which a standardized hospital differs from a non-standardized hospital is the way in which the trustees act. You know these trustees are great folks to have around. It works wonderfully with those fellows. You ought to see our trustees strut around now. When the report comes out today whether our hospital is standardized or not, or whether it comes in the list, I am going to send a telegram to every one of our trustees. Last year I sent one to them from Boston. When I got back those fellows were strutting around the streets talking about their hospital being standardized. They talk about how they standardized that hospital, and they are proud of the fact. The standardized hospi tal's trustees realize that they are more than the finance committee. They have found out that they are responsible for what goes on in that hospital, that an operation is not the first resort but the last resort; they have found out that it makes some difference who operates on the patient and who does not, and since they have found that out they have a greater respect for the minimum standard, and so has every one else connected with the hospital. That is one other thing that standardization has done for your hospital and mine.

Again, it has helped the folks who help manipulate the hospital, who run a hospital, who keep the thing going, in every sort of way. When things used to go wrong folks would try to camouflage and throw it off on somebody else, but we get together now and study it out, and we all take our share of responsibility for the thing. In our hospital we have a meeting every Monday afternoon at four-thirty. If anybody comes in late they have to pay ten cents. The one who offers the best suggestion gets a box of candy. I went broke giving candy so we had to quit. The folks have gotten together on that sort of proposition, and they are willing to help and are doing all in their power to make the hospital what it ought to be, and that is the thing most worth while.

Here is the last thing—the cost. Some people say it costs more to get into the standardized hospital. Yes, it does cost a little more, but not very much. Don't you insure your house against fire? Maybe your house never will burn up, but you are willing to insure it against the time that there might be a fire; you are protected. That is what standardization does. It may cost the patient a little more, but it is a protection against a lot of things. It is the difference between life and death in many instances.

Everybody here who has not yet attained the minimum standard can do it. You can do it if you want to. The trouble is that some of you don't want to. It is perfectly all right for the thing to go on and be standardized if you don't have to put any time or money or energy into it or if you don't have to do anything; if it will just kind of run itself it is all right. No hospital in this world ever went to bed on Sunday night and waked up on Monday morning standardized. It doesn't work that way. It means that the superintendent and the trustees and the doctors and everybody else must get behind the thing and push maybe six months, maybe twelve months, maybe eighteen months, maybe twenty-four months, to come through. Some of them may not want you to put in a laboratory, but you had better put one in. We had just a little hole at the end of the hall, and I said, "I am going to put a roof on that roof garden and wall it in and make a laboratory."

They said, "You will bust us wide open if you do."

I said, "Well, I'm going to do it," and I did, and that thing is making money today by making a flat rate for everybody that comes in there, and it paid for itself in two years. You can do it if you just get behind it and work and strive at it.

A negro preacher came down to Houston a few years ago, and he wanted to be called to the pastorate of the Baptist Church. They call it sampling, and he was called up to be sampled. If you have ever been in a negro meeting you know the negroes in the congregation help out the fellow who is speaking; they amen and hallelujah through the sermon. A big fat negro deacon sitting on the front row was helping the preacher. The preacher said, "Brethren and sistern, if I comes down here to be pastor of this here church, this here old church has got to get up and go."

The old deacon said, "Let her go, let her go! Amen, amen!"

"Brethren and sistern, if I comes down here to be pastor of this here church, this here church has got to get up and walk."

"Amen, amen! Let her walk, let her walk!"

"Brethren and sistern, if I comes down here to be pastor of this here church, this here church has got to get up and run."

"Let her run, let her run! Amen, amen!"

"I tell you brethren and sistern, if I comes down here to be pastor, this here church has got to get up and fly."

"Let her fly, let her fly! Amen, amen!"

"And, brethren and sistern, if I comes down here to be pastor of this church and this here

church gets up and flies, it's going to cost you all some money."

"Let her walk, let her walk."

EDITOR'S NOTE: This is an unedited transcript of the verbatim report of Mr. Jolly's remarks. It will be obvious to those who listened to Mr. Jolly that to edit his remarks would be to eliminate their effectiveness.

(The meeting adjourned at twelve-forty noon.)

AFTERNOON SESSION
OCTOBER 22, 1923

THE meeting convened at two-fifteen p.m., Dr. Malcolm T. MacEachern presiding.

CHAIRMAN MACEACHERN: While we would like to wait a few minutes and give you a longer recess, we have a very, very heavy program this afternoon. I expect Dr. Cushing will be here within a short time.

The first part of the program consists of four interesting papers followed by a Round Table Conference of practical questions. The first is *The Value and Need of More Attention to End-results and Follow-up in Hospitals Today*, by Dr. George Gray Ward, New York City, Professor, Obstetrics and Gynecology, Cornell University Medical College; Chief Surgeon, Woman's Hospital. We will now have an illustrated talk from Dr. Ward.

GEORGE GRAY WARD, M.D.: Mr. President, Ladies and Gentlemen: Since the inauguration of the hospital standardization movement by the American College of Surgeons in 1918, I have been interested in the subject and I have been fortunate in having unusual opportunities to put into practice the principles involved.

Sufficient time has now passed to enable us to begin to appraise the results obtained with precision. This appraisal shows in an indisputable manner the inestimable value of the proper study of our end-results, and the more we study our end-results the more apparent is the very great need of such an accounting.

First I am going to tell you how we carry out the follow-up idea in the Woman's Hospital in New York. We have four divisions of gynecology and one division of obstetrics. Each division has its follow-up clinic once a week, which *must* be attended by the surgeon in charge of the division and his assistants. It is not optional.

Definite rules are laid down for the study of our end-results; simple laparotomies, hysterectomy for fibroids for instance, are kept under observation two years. They come back four times the first year and twice the second year. The plastic cases, as for prolapse and so forth, we find require more extended observation and we keep them under observation for a period of three years. They come back four times the first year, twice the second year and twice the third year. Minor cases are kept under observation for a shorter period of time, and the cancer cases are kept as long as we possibly can keep them. At the end of the period of observation the cases are examined and classified as successful, partially successful, or failures, and discharged out of the follow-up. That classification is not based on the anatomical result of the operation, but upon whether the woman was cured of the complaint for which she sought relief. One may have a beautiful looking result as far as the appearance of the operative wound is concerned, but the woman may still have her backache or other complaint. That is a failure.

Each one of the follow-up clinics reports every four weeks in the staff conference. We have a weekly staff conference every Thursday afternoon which takes an hour, so that every week one of the divisions is reporting. They report the total number of cases seen during the past four weeks and how they have been classified. We pay no attention to their successes, but their failures and partial successes must be accounted for, the end-result cards being presented and the surgeon explaining why he classified a case as a partial success or a failure. (See Fig. 1.)

The Obstetrical Division also has a follow-up. Their problem is different from the gynecological problem. We cannot expect to have postnatal cases come back for any such long extended period, and it is not necessary nor practical, but we *can* get them to come back for three months and, therefore, in the obstetrical follow-up the mother and the baby report once a month for three months. If the mother is not able to bring the baby, the condition of the baby is accounted for by the mother, so we get three visits postnatal in the obstetrical follow-up and they are then discharged out with their classification. If there is a postnatal displacement of the uterus, or lacerations, etc., the patient is naturally referred to the Gynecological Department. (See Figs. 2 and 3.)

When I first went to the Woman's Hospital the follow-up was there, but it was really a follow-up only in name as far as any valuable conclusions could be drawn from their findings, because the attending surgeons in charge of the divisions rarely saw these cases that they had operated upon. The interne or the young man in the Out-Patient Department conducted the follow-up, and you can well imagine they would be rather wary of criticizing their seniors if sometimes they got poor results.

Upon establishing the rule that the surgeon himself must examine all cases, there was an immediate improvement in the attendance of over 100%. The success of follow-up, in my opinion, rests upon that one thing—that the surgeon who operated is the one who is going to examine the patient. If the patient knows that she is going to see the doctor who operated upon her, she will come back but she will not come back with the same readiness if an interne or an assistant is going to pass judgment upon her.

Of all our cases last year there were only fifteen per cent that refused to come back for the follow-up.

In addition to the usual follow-up and end-result study, I believe there should be special studies of end-results made in order to establish standards for comparison and check-up of our results.

Our records are a mine in which lie hidden vast treasures of information waiting to be excavated. For instance, a standard should be established as to what is an allowable mortality in simple hysterectomy for fibroids in order that our work may be compared with others. We should have standards of hospital operative morbidity in order that we may know if our patients are recovering properly.

I will give some instances of what I mean by the special end-result study from the improved records which we now have, due to this wonderful hospital movement.

As an example you may have a study of the mortality and infection of your staff. I hold that every hospital should have a study made and kept carefully year by year. If you will have graphic charts made, like a temperature chart, of each man's mortality percentage year after year and let them all be on the same chart for comparison, you can get your composite average of the staff as to what your mortality in that hospital is. Any marked deviation from that above the average line will naturally call the attention of that surgeon to the fact that something is wrong.

Of course, there must be an extended period of observation before you can make any just comparisons; it would not do for a short period of time because a run of cases might throw a great many serious cases in that particular man's hands; but year after year, with a general even distribution of the service, his mortality should not be very much higher than that composite average.

The same is true of the infection percentage. The infection percentage is an interesting thing to study, and in order to study it I found it necessary to institute a special record of the healing of the wounds in our history system, and I have, therefore, a sheet called the "wound record." It simply records whether the operation was a clean one, or whether it was contaminated at operation from pus or not. It shows the nature and character of the drainage if there was any, and the number of removable sutures that were placed in the wound. Every time the wound is dressed or inspected it must be recorded and the man who does it must sign his name to it.

For instance, in abdominal wounds the first dressing, we will say, is made at the end of the seventh day, primary union recorded and the sutures perhaps cut, the second dressing probably at the end of the tenth day and the sutures removed; and it is indicated so that you know that the same number of sutures that were put in were taken out, and the final inspection of the wound is made and the condition recorded when the patient is discharged at the end of her stay in the hospital. As the surgeon signs the case out, which he must do, he must state whether the healing was by primary union, or if not, what the trouble was. The same record is kept of the vaginal wounds and there is space on the back of the sheet for the recording of repeated dressings in infected cases. (See Figs. 5 and 6.)

It is perfectly easy, with these data in every history, to made out the infection perfectages of the staff.

A second example of special end-result study would be a study of the healing of wounds with various techniques. I have had one of my staff in the hospital, Dr. Byron Goff, make such a study, which he has just completed, of the healing of three thousand wounds. The results of this survey have shown that it was very necessary for us to have a standard whereby we could make our classifications, and, of course, that is something that may vary in different clinics naturally.

We have decided upon the following classification of the healing of wounds.

Class A is a complete primary union without any defects whatsoever.

Class B is a wound which did not unite by primary union because of a minor defect.

Class C is a wound which did not unite by primary union because of major defects. To determine what goes in Class A, B, or C, the rule is that no case which has been retained in the hospital one or more days because of the condition of the wound is to be classed in Class B. In other words, if that patient's convalescence has been

Woman's Hospital in the State of New York

END RESULT CARD

Name Address History No.

Change of Address Referred to Hospital by

Name and Permanent Address of Friend Surgeon

Age S. M. W. Date of Admission Date of Operation Date of Discharge

Came for Relief of:

Preoperative Diagnosis:

Operation

Pathological Diagnosis

Final Diagnosis

Important Points, Convalescence, and Discharge Note:

FIGURE 1

Woman's Hospital in the State of New York

OBSTETRICAL DEPARTMENT

END RESULT CARD

Name Address Para History No.

Change of Address Referred to Hospital by

Name and Permanent Address of Friend Surgeon

Age S. M. W. Date of Admission Date of Delivery Date of Discharge

Previous Obstetrical History

Character of Pelvis and Soft Parts

Character of Pregnancy

Character of Labor

Character of Puerperium

Operation

Final Diagnosis

Discharge Note:

Pelvic Floor Ant. Vag. Wall

Uterus Cervix

Adnexa Breasts

Infant

Previous History

Weight at Birth

Weight on Discharge

Condition on Discharge

Condition at End of First Month

Weight

Umbilicus

Genitals

Eyes

Breasts

General Condition

FIGURE 2

END RESULTS

At each examination state condition of Breasts, Abdomen, Pelvic floor, Ant. and Post. Vaginal Walls, Uterus, Cervix, and Adnexae; also give complaints and treatment.

First Month Date

Second Month Date

Third Month Date

FIGURE 3

WOMAN'S HOSPITAL, NEW YORK

Classification of Wound Union

CLASS A.

Wounds Which Unite By Primary Union

Any break in the union of a wound excludes it from Class A.
Any discharge of blood, serum or fatty material which occurs after the tenth day excludes a wound from Class A.

CLASS B.

Wounds Which Do Not Unite By Primary Union Because of Minor Defects such as:

1. Slight infection.
2. Slight degree of fat necrosis.
3. Small hematoma.
4. Slight stitch hole infection which involves the line of union of the wound.
5. Collection of serum discharged after the tenth day.
6. Slight separation of the tissues.
7. Slight degree of pressure necrosis.
8. Cigarette or tube drain following the removal of which the wound heals promptly by granulation without infection or with only slight infection.
9. Cigarette or tube drain plus slight infection about the drainage tract.
10. Foreign body (unabsorbed suture material, etc.), following the removal of which the wound heals promptly by granulation with or without slight infection.

No case which has been detained in the hospital one or more days because of the condition of the wound is to be placed in Class B.

CLASS C.

Wounds Which Do Not Unite By Primary Union Because of Major Defects such as:

1. Extensive infection.
2. Marked degree of fat necrosis.
3. Large hematoma.
4. Extensive stitch hole infection which involves the line of union of the wound.
5. Wide separation of the tissues, with or without partial evisceration, which results in prolonged healing by granulation with or without infection.
6. Marked degree of pressure necrosis.
7. Cigarette or tube drain, following the removal of which the drainage tract heals by prolonged granulation without infection.
8. Cigarette or tube drain plus extensive infection about the drainage tract.
9. Foreign body (unabsorbed suture material, etc.), causing a sinus along which there is prolonged granulation or infection.
10. Intestino-abdominal or vesico-abdominal fistula.

All cases which have been detained in the hospital one or more days because of the condition of the wound are to be placed in Class C.

Small rubber tissue or silkworm-gut drains placed in fat of the abdominal wall are not to be considered causes of faulty union.

Figure 4

delayed by the incision not healing properly, we do not put it as a minor defect. If she has lost time and the hospital has lost time, she goes in Class C, and all cases which have been retained in the hospital for one or more days on account of the condition of the wound are placed in Class C. That is the classification we have used and we have found that with this rigid classification, because *it is* a rigid classification, we have a percentage of the healing of all wounds, clean and contaminated, of approximately 90% +. (See Fig. 4.)

This study of 3,000 clean wounds showed that delayed union from all causes resulted in 1,584 extra days' stay in the hospital. Just consider the economic importance of this to the hospital from the financial standpoint, where it costs four or five dollars a day to keep free cases in the wards, and also the loss of time to the patient.

As another example of special end-result study, we made a study to establish the standard of normal postoperative convalescence, in order that we might judge of the normal postoperative morbidity. We wanted to know some of the facts relating to this patient's postoperative course, and we made a study to determine the postoperative leukocytosis, polynucleosis and the temperature in a series of clean laparotomies. In

Woman's Hospital in the State of New York

WOUND RECORD

Name _____ Record No _____

ABDOMINAL, LUMBAR or BREAST WOUNDS

Site _____ Operation _____ Date _____

Was wound contaminated at time of operation? _____

Drainage _____ Removed on _____ By Dr _____

Number of Removable Sutures _____ Removed on _____ By Dr _____

Wound Healed By _____ Cause of Failure to unite by Primary Union _____

Condition of Wound on Discharge _____ Surgeon _____

Date	Condition of Wound	Organisms	Character of Dressing	Dressed By

VAGINAL WOUNDS

Site _____ Operation _____

Drainage _____ Removed on _____ By Dr _____

Number of Removable Sutures _____ Removed on _____ By Dr _____

Wound Healed By _____ Cause of Failure to unite by Primary Union _____

Condition of Wound on Discharge _____ Surgeon _____

Date	Condition of Wound	Organisms	Character of Dressing	Dressed By

Record Additional Dressings on Reverse Side of Sheet

FIGURE 5

ABDOMINAL, LUMBAR or BREAST WOUNDS

Date	Condition of Wound	Organisms	Character of Dressing	Dressed By

one series for a period of nine and ten days, we had the postoperative blood counts taken every day and in another series every hour for twenty-four hours, in order that we could establish a standard and map graphic charts. It was a most interesting and valuable study and was made by two of my fourth year undergraduate students at Cornell University.

As to the value of end-result studies, they should be particularly directed to the determination of the physiological rather than the anatomical results. They are of great value to the patient, to the surgeon and to the hospital—for the patient the mortality and morbidity are reduced; for the surgeon his illusions are dispelled; and for the hospital greater economy and consequently larger activities. The days saved to the patient and to the hospital by more speedy convalescence mean money saved to both the patient and the hospital.

The economic value of end-result study is incontrovertible. The surgeon becomes more proficient and is stimulated to greater efforts and to the correction of faults.

As to the need of end-result study, there is the same need for auditing our surgical results as there is need of auditing our finances. There is a need to establish standards for comparison of results, and this auditing is needed by the leaders of the profession just as much as by the rank and file.

In my opinion, the greatest need of the surgical profession today is the development of a surgical conscience. Very, very often our surgical conscience lies dormant, lulled into a peaceful slumber by the droning of tradition and the warmth of self-satisfaction. It needs but to be awakened by the stimulus of light in order to function to its fullest extent in carrying out the Golden Rule. That light can only come from an honest auditing of our surgical results. A good beginning has been made, but patience, persistence, and publicity are necessary in this propaganda.

I wish to take this opportunity to pay a tribute to Dr. Codman by expressing my great appreciation of the wonderful work and great good that he has accomplished by his fearless insistence of our recognition of the great need of end-results study in our hospitals today. He has been the means of saving many lives, much suffering, and much money.

CHAIRMAN MACEACHERN: The Hospital Department of the American College of Surgeons is very anxious to stimulate more interest in follow-up. That is why today we have two authorities in this work with us. We will now hear from Dr. Ernest A. Codman, of Boston, Chairman of the Committee on Registry of Bone Sarcoma, American College of Surgeons, on *The Registry of Bone Sarcoma as an Example of the End-Result Idea in Hospital Organization.*

ERNEST A. CODMAN, M.D.: Ladies and Gentlemen: In the first place, what is the end-result idea? It is that every hospital should trace each patient with the object of ascertaining whether the maximum benefit has been obtained and to find out if not, why not.

Having ascertained the results of the treatment of each patient, the existing organization need not be changed until a more promising one is thought out. The end-result idea merely demands that the results shall be constantly analyzed and possible methods of improvement constantly considered. Bad results may be due to incorrect diagnoses, to lack of equipment, to errors of care, of judgment, or of skill. The end-result idea implies that the hospital should be conscious of its shortcomings, and constantly on the watch to improve its equipment and method.

This statement seems so simple that the ordinary common-sense business man on the Board of Trustees supposes that probably this is being done by the doctors—of course it's no business of his. Now as a matter of fact you and I know that until within a few years it was never done systematically in any hospital, and that even now, in spite of the efforts of the American College of Surgeons, there are very, very few hospitals which do it systematically and thoroughly.

When a hospital receives a legacy, the trustees are much more apt to put the money into a new ward to increase the numbers of its patients than into a follow-up system which may improve the quality of its work.

Hospital trustees in their individual businesses are the kind of men who deliver high class goods, and thoroughly inspect the products of their factories to make sure that they do not ship goods which will be thrown back to them because imperfect. Why don't they apply the same common sense in their hospitals?

It is a most curious phenomenon that these astute business men universally think that common sense cannot be used in medical matters. Perhaps it is because they are as a rule dominated by the successful practitioners of their neighborhood whose very success stamps them as unfit to advise in straightforward matters. I believe it is almost axiomatic that the trusted medical advisers of hospital trustees everywhere oppose the end-result idea because they know that their own success is due not to their ability to cure the

disease, but to their ability to satisfy the patient. Knowledge of anatomy and pathology have little to do with the ability to accumulate practice, and I believe it will be found that the medical advisers of hospital trustees the world over do not shine on pathology so much as in the ability to make dying men think they are getting better, to conceal the gravity of serious diseases, and to exaggerate the importance of minor illnesses to suit the occasion. Such a man can glorify the joy of birth and hallow the exit of the wretched sinner, and influence his widow to give a new ward to the hospital. But he absolutely does not want the trustees and consequently the better class of practice of his community to prove by analysis of his actual results that the recently arrived Dr. So-and-So fresh from European study and for several years resident surgeon at the University Hospital makes fewer errors in diagnosis and less errors of judgment in care and skill than he does.

Perhaps I have done this man whom I will call Dr. Wisdom an injustice. At any rate there he stands in the way of the end-result idea. I must at any cost win Dr. Wisdom. Perhaps I should mention that without this type of man many a hospital would not be as good as it is today. He has done what his time demanded. In many cases, as well as being a master of human nature, he has been an earnest student too. Even when merely a dominating personality, brushing small matters aside, he has really had the interests of his hospital at heart and now if he can find a way to retire gracefully before the end-result idea, he will make the sacrifice. He is far too shrewd not to see the justice of the idea; it is the proportion of weight that should be given to it that puzzles him. He believes in the art rather than in the science of medicine. He knows that the hospital cannot be all art or all science, so favoring art he opposes science because he is essentially a partisan. He believes that the hospital should do as he has done—look to its reputation first. If it makes an error, cover it up as soon as possible; if it makes a success let everyone in town know it. But in these times he is an ostrich with his head in the sand, for operations and diseases are dinner table talk. Strangely enough in these times of feminine knee breeches, heroic gunmen, movie queens and murders, there is an actual demand for the plain truth about operations and other medical matters. Dr. Wisdom will find it advisable to personally conduct the trustees through Bluebeard's house, even into the secret chamber where they will become parties to the guilt.

What has the Registry of Bone Sarcoma to do with all this? As the title of this paper suggests it is an example and a horrible example at that. There are many rare diseases and Bone Sarcoma is one of them. It occurs in a ratio computed to be about two or three persons to the million at any given time. Few doctors see more than an occasional case in a lifetime; few hospitals see a hundred cases in a decade.

It is a singularly fatal disease, singularly pathetic because it frequently attacks promising youth. It is difficult to diagnose clinically by the X-ray or by the microscope, and consequently usually masquerades under some other diagnosis until fully developed and hopeless. It is commonly treated by surgery, Coleys Toxins, the X-ray and Radium, and cures are claimed by the advocates of each method. However, since the diagnosis is difficult every cure is open to the challenge of mistaken diagnosis.

Since it is rare, few surgeons can study enough cases for proper comparison. Since to prove a case, good records, good X-rays, good sections and a knowledge of the outcome are necessary, it is rare that even large hospitals have many complete cases. Then too the percentage of cures is exceedingly small from any kind of treatment, in fact smaller than that of erroneous diagnoses. Also there are varieties or subdivisions and these varieties have received so many different names that an almost useless nomenclature has developed, each item of which is disputed.

Since the condition is so rare and difficult to diagnose and treat, there are few patients afflicted with it who do not suffer from hospital inefficiency. Nearly every case is mis-diagnosed for a time and then imperfectly treated. They go from hospital to hospital vainly seeking relief; seldom does any one hospital see a case through. Under our present system of medical organization and hospital organization it is a fortunate chance if one of these patients happens to fall into the hands of someone who has a reasonable knowledge of the disease, in a stage early enough to be hopeful for treatment. And this unsatisfactory condition is even worse in the converse error, for many cases which are not Bone Sarcoma but benign conditions are treated erroneously as Sarcomas. Now the Registry of Bone Sarcoma asks all hospitals and all surgeons in this country to apply the end-result idea to this one condition. It is so rare that careful record and treatment of these cases is practicable without great effort. If we are in earnest the American College of Surgeons can collect the records, X-rays and specimens of every case that occurs in the United States, and see that these data are subjected to

special study until some method is found to make an early diagnosis in a stage hopeful for cure. We need not interfere in the least with treatment. Experiments in treatment must be tried, but the records of these experiments must not be lost. The Registry is an activity of the College with these objects in view.

Let us not lose sight of the fact that Bone Sarcoma is only one of many rare diseases which because of their infrequency are not recognized and are mistreated. Anyone who is intimately familiar with present hospital conditions knows that the end-result idea, as applied to all rare diseases as a whole, is an ideal to be followed rather than achieved; but that to make a practical example in this one disease is eminently attainable.

We want to put Dr. Wisdom in good company. Let the Regents register their failures in Bone Sarcoma. Let the class A hospitals register theirs, and let every Fellow of the College register his. When we have done that we can register the failures of the Christian Scientist and chiropractors, for all their cases come to the hospitals in the end. We are no better than the irregulars if we let rare cases come to our hospitals and make no provision for their receiving the best possible treatment with honest records of success of our experiments. Dr. Wisdom will not risk his reputation by registering these cases unless he feels sure all the other Doctor Wisdoms are going to also. We must make it fashionable to secure Dr. Wisdom's help. Something like 400 surgeons have already set an example. Practically every case of Bone Sarcoma that has occurred in Massachusetts since January 1, 1921, has been registered; yet we are still waiting for the Dr. Wisdoms of many of the prominent clinics in other states.

With the material we have on hand we have made some scientific headway, and in conjunction with a committee from the American Society of Clinical Pathologists we have settled on a standard nomenclature for general use in the operating room, in the laboratory, and the X-ray room. The report of this classification is out of place here, but to those of us who have endeavored to wrestle with the old forms of classification, the advent of a standard classification is like the rising of the sun.

It seems to me that it is self-evident that when the end-result idea eventually penetrates the minds of hospital trustees they will no more think of letting Dr. Wisdom treat their Bone Sarcoma cases than they would now let him treat a prize bull on their private stock farm. Any one of them today would let him treat one of their children for Bone Sarcoma, so accustomed are they to have him puff himself up and assume the necessary importance for an occasion. Some of these days Dr. Efficiency will demand a separation of the cases which are rare and difficult, and therefore need study, from the routine cases which mean simply care and work in the application of known principles, and may be cured by any well trained physician. Study in the first ward will be expected of the staff; work and results will be demanded in the second. This will be a contrast to the present condition where the trustees expect neither study nor care and shut their eyes to even indifference and neglect, and take no inventory of their product.

Personally, I should be sorry to see a hospital conducted with the mechanical routine of a packing house or cotton factory. Efficiency does not mean hardness and inhumanity, and on the other hand kindly sympathy and excellent nursing will not help a boy with Bone Sarcoma under treatment for rheumatism. The good-will of a hospital can continue in spite of the follow-up system, and sympathy should never be allowed to smoke-screen essential errors. By allowing these boys to be kindly treated for rheumatism we are postponing the time when we can kindly cure them. Some form of cure must be devised. Instead of shutting our eyes year after year and waiting for the accidental discovery of the cure, let us record and study all cases and intensively work on the problem until we solve it.

I want to see the American College of Surgeons as a pack of hounds on Bone Sarcoma, each baying when he finds a case and bringing it to the attention of the pathologists of the country. I want to see radium experts and radiologists registering their cases as soon as they begin treating them, and keeping the College informed through the Registry of their progress. When a better treatment is found we surgeons are ready to give up surgery, for we know at the best surgery is very unsuccessful in the late cases which we ordinarily see. In three years the Registry has only found five five-year cures of true osteogenic sarcoma by amputation.

You will be surprised to know how few cases our Committee has been able to collect in three years. Only four hundred altogether, and the majority of these are not true Sarcomas in our opinion. Why is it that we have obtained so few? Why—because Dr. Wisdom opposes! For years he and his professional ancestors before him have forgotten their failures and buried their evidence as fast as they could. The entire habit of the medical profession must be changed if the Registry

of Bone Sarcoma is to be a success. Dr. Wisdom has got to come across. There is a group of Dr. Wisdoms who form our Regents; another group direct the activities of the American Medical Association. All these Dr. Wisdoms are more or less students, but the great bulk of the Dr. Wisdoms throughout the country do not bother with these associations. They play golf, or shoot ducks with the trustees. They are too wise even to leave home for national medical meetings. They will let their young competitors go to the meetings and pull some chestnuts out of the fire for them, and later sell these chestnuts in their own practices at a good profit. Dr. Wisdom would never have become confidential adviser to the trustees if his bank account was not worth soliciting, for a business man respects a man who succeeds in his own job. Dr. Wisdom may be a teacher or a research man as a hobby, but a rich practice is what the value of his advice is judged by. Somehow or other the end-result idea has got to be put through Dr. Wisdom, and the Registration of Bone Sarcoma is the entering point. These cases turn out badly anyway, and Dr. Wisdom's reputation and bank account will not suffer much. Once get him to see that in the end his hospital will be the better for registering the cases, and he will see that it is done. Dr. Wisdom, student or golfer, still holds the reins and he drives a covered wagon.

[illegible] College of Surgeons on the Registry of Bone Sarcoma, the following is [illegible]

OUR CALL FOR HELP

No matter how improvement in our knowledge about Bone Sarcoma is to come, it must be founded on the facts about the cases. This committee will be fully occupied in studying the data it receives. If it does its duty in receiving and arranging and studying the data, it should be able to rely on the members of the College to collect and send in the data. Few surgeons see so many of these cases that it will be a very serious burden for them to send us histories, X-ray prints and tissue or sections.

Isolated surgeons not connected with important teaching clinics have stood by us thus far better than the men connected with large institutions in the bigger centers. One reason for this is that in large hospitals the saying, "What is everybody's business is nobody's business," holds true. We hope that each such hospital will have the *esprit de corps* to help our Registry along. An individual may be appointed to register all bone tumor cases or each individual may register his own "supposed-to-be" sarcomata. We want to make it a general custom for every surgeon to send us tissue from his cases *at once* just as he sends it to his own laboratory. And if the surgeon fails we want the pathologist to do it. If he will share what tissue he gets with us he is welcome to any information we can give him about other cases.

DATA FOR REGISTRATION OF A CASE OF BONE SARCOMA

Name and address—
- of doctor registering case
- of patient
- of friend, with permanent address, who would be likely to answer follow-up letters
- of family physician
- of surgeon operating
- of roentgenologist
- of pathologist
- of hospital. Record reference or hospital number.

Dictate history so as to cover following headings, and typewrite four copies on standard typing paper.

Clinical note. Date it was made. Age at this time. Race. Sex. Bone involved—part of bone. Date of trauma, if any, character of trauma—date and duration of pain, swelling, tumor, fracture, loss of function.

Any other important clinical data.

Examination. Date and by whom. Notes on local disease, especially as to swelling, tenderness, loss of function, involvement of joint. Presence or absence of bone shell. Pulsation. Size and extent of swelling.

Brief note on general examination. Especially blood, Wassermann. Urine, Bence-Jones bodies. Physical examination of chest. Date and diagnosis of first X-ray. From X-ray whether considered central or periosteal. If there are no X-rays or prints to be sent, give as complete a description of the X-rays as possible. Note as to whether X-rays of other bones and chest were made, and results.

Treatment. Date or dates of treatments. Operation—exploratory incision. Piece taken for diagnosis. Curetting. Partial excision. Complete excision, extent. Bone transplantation, from where. Amputation, exact position. Coley serum. X-ray. Radium. Any other treatment.

Gross pathology. Description at operation or of specimen.

Microscopic. Description and diagnosis.

Condition at date of last examination or report. Date of this.

Have sections been preserved by you? Sent to Registry with this? To be returned or preserved?

Have X-rays been preserved by you? Sent to Registry with this? To be returned or preserved?

Has gross material been preserved by you? Sent to Registry with this? To be returned or preserved?

Make four typewritten copies, keep one and mail three to Dr. E. A. Codman, 227 Beacon Street, Boston, Massachusetts.

HOW TO REGISTER A CASE OF BONE SARCOMA

Cases eligible for registration: Any case which has been diagnosed as Sarcoma of Bone with sufficient certainty to justify the beginning of any kind of treatment on that basis. The investigation is not confined to the long bones, but includes instances of Sarcoma arising in any bone whether primary or secondary. For the present, we include cases of giant-cell tumor (except epulis of gum), although probably not sarcomata at all.

We do not wish to wait for certainty in diagnosis, but if an exploratory incision is to be made, we would like a good-sized piece of tissue removed. It is felt that there may be some cases in which, for good reasons, exploratory incision is inadvisable, and the clinical and X-ray diagnoses are satisfactory enough to justify the institution of treatment. We desire to follow such cases as well as microscopically proved ones. It is enough that the case is "a believed-to-be sarcoma," and is being treated in good faith.

In fact, we welcome every case of Bone Tumor for a preliminary study. Certificates with serial numbers will be issued by the Registry in each case in which we feel satisfied of the diagnosis of Sarcoma.

The history of a case for registration may be made out in two ways: Either take the record and dictate the history according to the scheme which is on the preceding page; or give the entire history to a stenographer and have it copied, just as it appears in your records.

Four typewritten copies will be of the greatest convenience, the physician registering the case retaining one for future reference, on which he can place the Registry series number when he receives the final report. The three copies go to Dr. Codman, one to be retained by him, two to be sent to the pathologists with the sections.

A most important thing to know, which usually does not appear on the history, is whether gross material, sections or X-ray plates have been preserved. In future cases, send us a good-sized piece of the tissue in 10 per cent formalin, so that it may be kept for study in later years. Be sure to send X-ray prints and to see that the original plates are permanently preserved, or sent to us to preserve.

In cases where the patient is of sufficient intelligence, it should be explained that the information given about his case is similar to what you will have access to about all other cases of the same disease in others; that his disease is a rare one; that the details about his case will help other sufferers as well as himself; that he will have the benefit of expert pathological opinion and, in fact, a national consultation for his own benefit and that of future patients with this lesion. Impress on him the importance of keeping the Registry informed, if he should become dissatisfied with your treatment, and go to some other doctor or clinic. He or his friends should understand the experimental nature of any treatment, and the importance of recording the failure or success of what you or any one else does for him.

CHAIRMAN MACEACHERN: *A Scheme for Surgical Rating*, by Dr. Ernest Leroi Hunt of Worcester, Surgeon and Director of the Surgical Services of the Worcester City Hospital.

ERNEST LEROI HUNT, M.D.: I hardly have the temerity to present this scheme after listening to Dr. Ward and Dr. Codman. I wish in starting to acknowledge my debt to both of my predecessors on this platform as it was in 1919 that a visit with Dr. Ward gave me the inspiration to do what little I could with my own problem. My problem has differed a little from Dr. Ward's in that it is a hospital doing different kinds of work and one in which we are a rather democratic organization, and I have no arbitrary authority.

There comes a time in the career of every thoughtful surgeon when the early glamour of operating gives place to a realization of the limits of surgery and a wholesome respect for the dangers incident to every operation. If he is candid he earnestly desires definite knowledge of the ultimate value of all the expenditure of money, effort, agony, and even life itself in the great surgical industry now so intensively functioning throughout the civilized world.

The wonderful growth of the College of Surgeons, which I believe to be founded on the principle that the good in surgery must be fostered and maintained while the worthless must be revealed and discountenanced, is evidence enough of the trend of thought and effort today. We all

know that it is necessary to bring surgery under sane control and we are equally aware that the ideal is that self-control which wise operators exercise individually. The attainment of wisdom, however, comes through experience and, therefore, the teachings of experience must be made available by proper recording. No record is complete until supplemented by an efficient study of end-results, so interpreted as to be truly informing. It is not enough to obtain information—it must rather be compiled, co-ordinated, condensed, and published that who will may learn.

Upon those persons to whom a community, trusting in their skill, knowledge, and integrity, delegates the task of providing its citizens with the best in surgical service, no small responsibility rests to seek accurate evaluation of the results obtained and to foster a spirit of sanity and restraint in the application of the stern methods of treatment comprehended by the term surgery.

In general we *average* surgeons are wont to base our prognostications of a given case-problem upon the teachings of the leaders in surgery. Our teachers of surgery are naturally the most competent in their specialties, so it cannot safely be assumed that the average surgeon can get equally good results. Now it is upon the average surgeon the great mass of surgically ill depend for cure. Upon him rests the moral obligation to interpret the teachings of the masters in terms of life and health to his patients.

Does the average surgeon really know whether he is beating the average results or trailing behind? Has he any way of knowing? My observation is that most of us find the immediate care of our patients so engrossing that we seldom pause to check up, and if we do we rarely have the data in shape to use for that purpose.

It is upon a method of making data upon the value of operative therapy available that I am asking your attention today.

It has recently been my privilege to occupy a position in which, under the impulse of the standardization program, it became possible to develop a perspective beyond the field of individual effort and to visualize something of surgery at large. The problem was to get an accurate measure of surgical results in the *mass* rather than for a few types of cases; for all operations by the whole staff rather than a few by individuals; the method developed brought to light results striking in their revelation of the incidental harmfulness and futility of a certain percentage of operations. That this percentage is so low is reassuring, but its mere existence is a challenge which we must first define, then resolutely accept.

Our effort to meet these needs has been through two agencies supplementing the already established record system.

(1) A scheme of rating operative results at the time of discharge from the hospital. This brings to light the immediate mortality, the minor casualties, the failures to relieve, the harmful effects incident to surgery itself, and also affords a basis not only for the staff conferences but for the trustees' review of the clinical work at their monthly meetings.

(2) Follow-up clinics. These are held Sunday mornings in the out-patient building by the surgeons and assistant surgeons aided by the Social Service workers. Here the interval history is taken, the patient's own estimate of the operation secured, its effect on the social relations, and productive capacity noted. Its effect on the physical well-being is found both by inquiry and examination, findings recorded and the operation re-rated.

THE RATING SYSTEM

The rating system may be defined as a condensed expression of results easily applied and lending itself to comparison and easy summation. Its values may be expressed numerically (as in the Mayo Clinic system, also used at Lankenau Hospital) or by other characters or by a combination. The important thing is that very definite and arbitrary values must be ascribed to whatever character is used. Our system, being in the process of development, is far from perfect, but has the merit of simplicity and is adapted to institutions having relatively little clerical help. It may be likened to a mirror wherein the surgeon may look his work fairly in the face, recognize his weaknesses and according to his capabilities go forth and do better work for humanity. It brings all results into relief so that a Board of Trustees may appraise the character of the service their institution renders the community.

The value of any statistical study depends upon the accuracy of the original data. For the purpose of the rating and follow-up system we make use of Summary cards as originally recommended by Codman to which the rating character is added by the surgeon when he signs up the record after discharge of the patient. These are filed by service and months. A year later letters are sent to the patients requesting them to come in for examination. To those who fail to respond a second invitation is sent, including the request that they report by letter if they cannot come in person.

The lantern slides which follow, illustrate the

methods in detail and the statistical tables show some of the possibilities for study which the possession of the data in accessible form opens up. The clinician and the administrator alike find material ready at hand which can prove a mine of information from many angles of approach.

SURGICAL RATING AND FOLLOW-UP SYSTEM OF THE CITY HOSPITAL, WORCESTER, MASS.

S.—SUCCESSFUL—Object accomplished, recovery, with relief of symptoms and cure of condition.

P.S.—PARTIALLY SUCCESSFUL—Object accomplished, recovery without complete relief of symptoms, or object but partially accomplished with or without complete relief of symptoms or cure of condition.

O.a.—OPERATIVE ACCIDENT—Injury to other structures, not necessary to accomplishment of purpose of operation.

O.d.—OPERATIVE DEFECTS—(a) Wound sepsis. (b) Painful, exuberant, or disfiguring scars, anesthetic areas, contractures, etc. (c) Hernias. (d) New symptoms or complicating conditions resulting from the operation or from its failure.

O.D.—OPERATIVE DEATH—Death as a proximate result of the operation.

F.—FAILURE—Object not accomplished, recovery without relief of symptoms or cure of condition, or death from the diseases uninfluenced by the operation, or recurrence of the disease.

D.E.—DIAGNOSTIC ERROR.

(The complete rating system is taken up in detail by the cards immediately following.)

S.—SUCCESSFUL

Object accomplished, recovery, with relief of symptoms and cure of condition.

P.S.—PARTIALLY SUCCESSFUL

Object accomplished, recovery without complete relief of symptoms, or object but partially accomplished with or without complete relief of symptoms, or cure of condition.

O.a.—OPERATIVE ACCIDENT

Injury to other structures, not necessary to accomplishment of purpose of operation.

(The hardest one of all to get reported.)

O.d.—OPERATIVE DEFECTS

a. Wound sepsis.
b. Painful, exuberant, or disfiguring scars, anesthetic areas, contractures, etc.
c. Hernias.
d. New symptoms or complicating conditions resulting from the operation or from its failure.

(Wound sepsis, phlebitis, bronchitis, iodine burns, disfigurements, and any morbidity accruing from the operation or its by-effects. The aggregate is surprisingly large.)

O.D.—OPERATIVE DEATH

Death as a proximate result of the operation.

F.—FAILURE

Object not accomplished, recovery without relief of symptoms or cure of condition, or death from the disease uninfluenced by the operation, or recurrence of the disease.

("F" may or may not be fatal. The operation is considered from the therapeutic standpoint rather than the mechanical. Ever so fine an operation which does not remove the disease is a failure. "A successful operation but the patient died" no longer applies.)

FOLLOW-UP RECORD

Dec. 29. Staff meeting report.

Dr. Hunt: "I originally intended simple gastro-enterostomy as first step in a Billroth No. 2. Mass seemed favorable for removal but trouble was experienced in separating it from the pancreas. After the resection, end to end anastomosis, after the Schumacher method, was done to save time. Operation required two hours which was too long. He died of shock soon after reaching the ward. I regret not adhering to the original plan."

Dr. Watkins: "The trouble with the method is too much tension"—He quoted a case seen at the——clinic done in a similar manner with death the next day.

(Reverse of Summary card illustrating "Operative Death." The case having been presented at Staff Conference, the explanation and comment are added in place of the follow-up note.)

RATINGS

SURGICAL YEAR 1921

	Success	Part'l Success	Op. Defect.	Op. Acc.	Failure	Op. Death	No. Op.	Totals	Total Deaths
East	507	69	33	4	38	10	235	896	59
West	404	110	27	0	37	7	218	809	47
E. E. N. T.	732	30	4	0	5	0	125	896	7
Ortho.	115	35	4	0	0	2	130	292	9
G. U.	43	21	9	1	3	0	96	173	16
Totals	1801	271	77	5	89	19	804	3066	138

Gross death rate 5.1%. Operative death rate 4.8%

"Op. Deaths," "Op. Accident," "Op. Defects" represent "Harmfulness." "Failures" represent "Futility" and perhaps bad judgment. Note Death Rates.)

ANALYSIS OF OPERATIVE DEATHS

1920—1921

Sex	Age	Operation	Disease	Cause of Death	Operator	Remarks
M	56	Herniorrhaphy	Incarcerated Rt. Femoral Hernia	Shock	Dr. E.	Ether
M	54	Herniorrhaphy	Hernia, Ventral strangulative	Oedema of lungs	Dr. F.	Ether by a Jr. Interne
M	49	Enterorrhaphy Appendectomy	Ulcer, Duodenal perforated Gen. Peritonitis	Shock	Dr. G.	Death on table
M	18	Appendectomy	Appendicitis Chronic Pulmonary T. B.	Lobar Pneu.	Dr. A.	Gas-oxygen
M	46	Pylorectomy Post-gastro-enterostomy	Ulcer, Duodenal	Shock	Dr. A.	2 hr. oper.
M	44	Appendectomy	Appendicitis Chronic Diverticulum of the jejunum	Bulbar Paralysis (Syphilitic)	Dr. F.	Autopsy
M	38	Disection of varicose veins	Varicose vein of leg	Embolism	Dr. H.	Sat up 16th day, then sudden death. Local anes.

"Op. deaths" are listed with explanatory note for presentation to trustees both at monthly and annual meetings. With the month's summary cards at hand the surgical directors can meet their questioning on the month's work with readiness.)

A brief calculation based upon Worcester City Hospital figures, to show conservatively the number of "Operative Deaths" in U. S. for 1921.

WORCESTER CITY HOSPITAL

1921

Ratio beds occupied daily to total Surgical cases treated annually	1—10
Ratio total Surgical cases to O. D.	150— 1

UNITED STATES

1921

General hospital beds occupied daily	184,991
Contagious beds (estimate)	34,991

1 : 10 :: 150,000 : 1,500,000—total Surgical cases U. S.
150 : 1 :: 1,500,000 : 10,000—total O. D. per year.

Comparative surgical mortality in seven institutions of similar type, to justify contention that Worcester City Hospital figures probably are representative of surgery at large.

	Hospital	City	Cases	Dead	Rate
1922	Charity	New Orleans	8734	479	6.6%
1922	Children's	Boston	1154	69	5.9
1922	Peter Bent Brigham	Boston	2054	110	5.3
1922	City Hospital	Worcester	3334	171	5.1
1922	Mass. General	Boston	4087	218	4.6
1922	Grace	Detroit	3691	116	3.1
1922	Union	Fall River	1690	37	2.1

Comparative Operative Mortality

	Hospital	City	Operated	Deaths	Rate
1922	Worcester City	Worcester	2433	90	3 7%
1922	Peter Bent Brigham	Boston	1702	71	4 1%

(Only one other report in a pile of twenty gave definite figures on operative death rate, or if it was indicated in the tables, was not totaled so as to stand out clearly.)

Follow-Up Statistics

ADDITIONAL FAILURES BY DEATH AFTER DISCHARGE

	Operated	Not Operated	Total
Same cause	24	26	50
Other causes	19	3	22
Total	43	29	72
*In hospital	13	11	

Revised Mortality

	Cases	Deaths		Rate
		Primary	Late	
Gross	3066	158	50	6.4%
Operative	2262	110	24	5.9%

*Also charged on primary mortality elsewhere.

Analysis of Deaths Since Discharge

		Original Disease	Complication of Original Disease	Unrelated Causes	Total
Cancer Group	Operated	13	1	2	16
	Not operated	6	..	..	6
	Radium, etc.	6	.	..	6
Tuberculosis and Syphilis	Operated	3	..	..	3
	Not operated	8	1	..	9
Traumatisms	Operated	1	1	2	4
	Not operated	3	..	1	4
Head and Oral	Operated	2	1	4	7
	Not operated	0	0	0	0
Miscellaneous	Operated	3	2	8	13
	Not operated	3	..	1	4
Totals		48	6	18	72

The follow up clinics held Sunday mornings by chief of service and assistant, one year after discharge.

Example of original summary card with rating "S"—successful, re-rated subsequently as "Od.c." "Operative defect Hernia."

SUMMARY CARD

Name A——, Katherine *Address* 25 Main Street *Hosp. No.* A 22923 *Service,* E. Surg. M.

Final diagnosis: Prolapse of uterus, 2°
37-130
Physician referring patient: Dr. A. Werner
Address..19 Pearl Street
Responsible relative or friend: Husb. Eric
Address..Same
Came for relief of..Dragging pain in lumbar back and pelvis, protrusion of Uterus
Working diagnosis: Prolapse of Uterus
Anæsthetic and Anæsthetist: Ether Miss Fennell

Age 68 *Adm. date* 10-5-21 *S.M.W. yrs.* *Op. date* 10-7-21
Other entries....None *Disch. date* 10-23-21
Treatment: important points
Operation..Ventral Fixation.....Rating.....(S)...p.S
Operator....Dr. Z.
Complications..None
Pathological or X-Ray Report..Renal Function 20%. W.B.C. 9600 B.P. 130-90
Condition on discharge..Cured
Ref. to..Dr. Werner

Reverse of Summary Card on Follow Up Clinics, with Follow-Up Note and Reason for Change of Rating

10-1-22. Address O. K.
Interval history: Had influenza with severe cough followed by burning pain along scar with bulging. Frequency of micturition.
Exam. Uterus in good position.
Ventral hernia through scar.
Rating. Od. c.

Readjustment of Ratings After Follow Up
1922

	On discharge	1 year later
Success	633	624
Partial success	94	96
Operative defects	27	21
Diagnostic error	2	0
Failure	3	18
Total	759	759

(Note increased number of failures. Operative defects originally were mostly wound sepsis. At the follow up were hernias, bad scars, etc.)

Analysis of Operative End-Result Clinics
1922 Follow-Up Clinics

Operative cases asked to return	2173
Number actually reporting to clinics	748
Number actually reporting to own surgeon	11
Total examined	759 or 35%

CHANGES IN RATING

Lower to Higher		Higher to Lower	
P. S. to S.	37	S. to P. S.	41
O. d. to S.	15	S. to O. D.	11
D. E. to P. S.	2	S. to F.	9
O. d. to P. S.	1	P. S. to O. d.	1
F. to P. S.	1	P. S. to F.	5
		O. d. to F.	2
Total	56 or 7.3%	Total	69 or 9%

Efficiency rate: 100% − 9% = 91%.

(Analysis of changes in ratings expressed in percentages and indicating a means of estimating "Efficiency"—rather crude but allowing of comparison year by year.)

EXAMPLE OF HOW THE RATED CARDS MAY BE USED TO STUDY CASE GROUPS FROM THE POINT OF VIEW OF END-RESULTS

Group	Total No. of Ops.	No. Reported to Clinic	1921 Disch. Rating	1921 Final Rating	Reason for Change in Rating
			Higher	Lower	
Appendix	202	97	S.	Od. b.	1 Unsightly scar
			S.	Od. c.	6 Ventral hernias
			S.	P. S.	4 Symptoms only partially relieved
			Lower	Higher	
			P. S.	S.	3 Complete recovery
			Od.	S.	1 Complete recovery
			Od. d.	P. S.	1 Has bladder symptoms

ANOTHER EXAMPLE OF CASE GROUPING

Group	Total No. of Ops.	No. Reported to Clinic	1921 Disch. Rating	1921 Final Rating	Reason for Change in Rating
			Higher	Lower	
			S.	P. S.	4 Relief of symptoms with partial or one-sided recurrence
Hernias	108	47	S.	Od. d.	1 Phlebitis—Varicose veins
			Lower	Higher	
			Od. a.	S.	5 Exam. shows complete recovery
			Od. d.	P. S.	1 Recurrence of Ventral Hernia
			P. S.	S.	Complete recovery

A THIRD EXAMPLE WHICH PUT AN END TO UNSUPERVISED ADENO-TONSILLECTOMIES BY INTERNES

Group	Number of Operations	Reported to Clinic	1921 Disch. Rating	1921 Final Rating	Reason for Change in Rating
Hyper T's and A's	620	97	S.	P. S.	24 Some tonsil tissue remaining

OPERATIVE DEATHS

TABULATED ACCORDING TO FINANCIAL RELATIONS TO OPERATOR

	1922		1923		1924	
	Free	Private	Free	Private	Free	Private
Dr. A.	1	1	2	[illegible]	[illegible]	1
Dr. B.	[illegible]	1	4	1	[illegible]	[illegible]
Dr. C.	3	1	3	1	[illegible]	1
Dr. D.	1	0	0	0	1	0
Dr. E.	1	0	2	1	[illegible]	2
Dr. F.	0	0	1	[illegible]	0	1
Dr. G.	0	0	1	0	1	2
Dr. H.	0	0	1	[illegible]	[illegible]	2
Dr. I.	1	0	1	0	[illegible]	1
Dr. J.	0	0	1	[illegible]	0	0
Dr. K.	0	0	0	[illegible]	0	[illegible]
Others	1	0	0	1	4	0
Totals	11	3	10	6	17	11
	14		22		28	

The ratio of pay to non pay patients is about 1 to 6 at Worcester City Hospital. These figures are too small to make sweeping conclusions from. Careful analysis of the cases would be necessary to a just conclusion.

One of our latter-day humorists is quoted as saying, "Doctors are cheerful cusses—they bury their mistakes, then go merrily on to the next." Had he realized the burden represented by the "Operative Deaths" column and the resolution which the surgeon must exercise in order to respond with his best to the urge of human need as represented by the "Success" column, he would have known that the agony is not all borne by the patient.

Keeping in mind that we are considering surgery as a therapeutic agent wholly aside from the educational value of its experiences, we may say that the "failure" column represents "futility," the "Operative Death" and "Operative Defect" columns represent "harmfulness." And if I may assume that there is in North America an aggregate bed capacity of 150,000, each bed serving 10 surgical patients annually as is the approximate ratio at our hospital, then there would be 1,500,000 cases treated with 10,000 "Operative Deaths" each year. Is not that a matter worthy of our deepest consideration?

That I choose for the purpose of this paper to exhibit the obverse of the shield, should not lead any to assume that the face thereof is less bright than that of other institutions of like size and character. In defense of the claim that my figures are fairly representative of surgery at large I have compiled tables of comparative mortality from reports of various hospitals for the year 1922.

THE FOLLOW UP

As already pointed out the follow-up clinics are carried out by the voluntary service of the visiting surgeons, each of whom gives an hour or more one Sunday a month during his six months' service. The clinics of themselves have a threefold value—to the surgeon in bettering his knowledge of his own results; to the patient in that relievable complications, recurrences, etc. are detected and the patient guided to relief; to the hospital and staff in general by the data gathered as to the quality of the work done and the usefulness of the various procedures. In our three years' effort along this line the number returning to the clinics has been disappointing, and a first practical lesson learned is the necessity of educating the patient before he leaves the hospital to the obligation of returning to the clinic when asked. We are trying to accomplish this by a card, which is filled out and given to the patient on discharge, supplemented by a little explanation of the advantages to both patient and hospital to be derived from the follow-up.

A minor difficulty likely to disappear as the work progresses lies in the fact that we doctors are all individually-minded and it is not easy to acquire the habit of cleaving sharply to the definition. But my wonderment is that it has been done so well and I am deeply indebted to my colleagues for their coöperation and the candor with which they have rated their own work. They have given me a demonstration of successful democracy which I value beyond words.

RECOMMENDATIONS

Being persuaded of the value of such a system and knowing well that it needs perfecting, I do not hesitate to recommend that the College of Surgeons through its trained workers devise and promulgate a system for universal application, secure the coöperation of hospitals everywhere in follow-up work, with uniform expression of the

values, the data to be later deposited with the College for consolidation and publication of the final results. Thus, country-wide figures could be obtained and worth-while deductions drawn. An exchange of follow-up notes between hospitals would be of great value and serve as another link binding institutions together in the great task of interpreting in terms of health the great principles of the Science and Art of Surgery. This I offer as one practical means for realizing something of that vision of coöperative effort depicted so eloquently and persuasively by our honored president at the Convocation in Boston last year.

CHAIRMAN MACEACHERN: We will now have an address by Dr. Nathaniel L. Faxon, of Rochester, New York, Superintendent of the Strong Memorial Hospital, on *The Problem of the Hospital Interne.*

NATHANIEL L. FAXON, M.D.: One of the present-day problems of medical education is that concerned with hospital interneships. This paper is intended to present the problem of the hospital interne as it stands at present, the various groups interested, and why and how they are interested. No conclusion will be reached and no suggestions as to the proper handling of this problem will be made at this time. The Interne Committee of the American Hospital Association hopes to be able to make such recommendation next year.

The primary function of hospitals is to care for the sick; their secondary functions are teaching and research. Hospitals have accepted the position of teaching institutions because it has been found that the teaching of doctors and nurses is as important a part of hospital service to the community as is the care of patients. This teaching of doctors in hospitals now presents itself as the problem of interne service.

Interneships were recognized as desirable in extending medical education and as of service to hospitals as early as 1870. The first survey of hospitals in the United States was made by the American Medical Association in 1912. It listed 2,424 hospitals of more than 25 beds of which 852 had internes, providing about 2,000 annual interneships for the 4,000 yearly graduates. Further surveys were made in 1913-14-15 and in 1916 a list of hospitals providing suitable training for internes was published, giving 687 hospitals as approved for internes with 3,340 interneships. In 1923 out of 2,924 hospitals of more than 25 beds, 1,000 desired internes, but only 653 were approved as suitable for interne teaching, providing 3,671 interneships for a graduating class of 3,400. To fill the interneships of approved hospitals would therefore require 275 more graduates than provided. If all demands were fulfilled the shortage would be about 650. Some believe the shortage greater than shown by these figures, contending that many hospitals would use internes if there was any reasonable chance of getting them. To relieve this shortage the following suggestions have been made:

(1) To increase the number of medical graduates.

This is contrary to the present interpretation of the needs of medical education. There is an annual loss by death of 2,300. Approximately 500 additional doctors are needed annually to provide for the increase in population. The average graduating class for the last six years is 3,400, so it would seem that quality not quantity is what is needed.

(2) To increase the average interneship from one to two years.

(3) The use of non-medical chemical assistants.

This suggestion was advanced by Dr. S. S. Goldwater of the Mt. Sinai Hospital, New York, and is now being studied by a committee of the American Conference on Hospital Service. It proposes to relieve internes of certain routine duties and to supply a want in hospitals that cannot obtain internes. By employing a mixed force of internes and non-medical technicians a considerable number of internes might be released for service in other or smaller hospitals.

The campaign of the American College of Surgeons for the improvement and standardization of hospitals began in 1918 with the publication of the essential requirements of a minimum standard for hospitals and a list of hospitals which met these requirements. Although not dealing directly with the interne problem, this minimum standard has indirectly influenced the teaching of internes, bringing improvement in this department of the hospital as well as in others that were directly considered.

In 1919 a tentative schedule of essentials in a hospital approved for internes was prepared and published by the Council on Medical Education and Hospitals of the American Medical Association, which has formed a measure by which hospitals could be judged as to whether or not they provided suitable training and teaching for internes in return for their services in carrying on the work of caring for patients in the hospital. In the best hospitals most of these requirements had already been in force, having been introduced by their staffs and managements in order to

attract the best internes and in order to carry out the teaching function which was beginning to be accepted as an important part of a hospital's service to the community.

This standard, similar in most respects to the minimum standard for hospitals prepared by the College of Surgeons, imposes no hardships upon the larger general hospitals, enumerating mainly what had already been found to be for the best advantage of the hospital, its patients, and its internes. As applied to the smaller hospitals of from 25 to 100 beds the literal fulfillment of these requirements was often burdensome and difficult, but these difficulties were in most cases bravely approached by the hospitals, and arrangements made which provided for the carrying out of the spirit of this standard.

These essentials are:

1. There shall be an organized staff willing to assume the obligation of teaching internes by personal instruction and by monthly clinical conferences.
2. The hospital must have a pathological department, suitable laboratories, X-ray equipment and roentgenologist, library, and proper quarters for the internes.
3. Real records of cases must be systematically taken and properly filed, under the care of a librarian.
4. The work of the internes must be regulated so that they will systematically take up history taking, clinical laboratory work, X-ray, anesthesia, maternity cases, necropsies, responsibility for the diagnosis and care of patients, surgical dressings, operations, etc. Without specifically so stating, it is suggested that where a non-rotating service is chosen, additional service be taken in a hospital that will supply any deficiency in training.

Coincident with the compilation of the approved list of hospitals for internes by the American Medical Association Council, certain medical schools began to adopt the requirement of a fifth or interne year to be spent by the student as an interne in an approved hospital or in other acceptable clinical work before granting the degree of M.D. These schools recognizing the need of practice as well as theory in medicine, believed it for the best interests of their students to control this year, to make the faculty of the school responsible and to withhold the degree until its satisfactory completion. In general the plan followed is to grant a certificate to students who have successfully passed the first four years' studies and to require them to secure by examination or appointment an interneship in some hospital approved by the medical school. A supervisor from the medical facutly is assigned for the fifth year, who reports both upon the work done by the student and the facilities provided by the hospital. If both are satisfactory the degree of M.D. is granted at the end of the year. Such an arrangement implies obligation upon the medical school to see that each student gets an interneship somewhere, so that some sort of a working agreement must be made between medical schools to supply hospitals with a certain number of internes and vice versa, hospitals must agree to provide an equal number of places for students. Certain latitude of choice for both student and hospital exists. Altogether there are now 11 medical schools out of 82 which have adopted this plan—

1910 University of Minnesota Medical School
1914 Stanford University Medical School
1914 Rush Medical School
1914 University of California Medical School
1915 Marquette University School of Medicine
1915 Northwestern University Medical School
1917 University of Illinois College of Medicine
1917 Loyola University School of Medicine
1919 Detroit College of Medicine and Surgery
1922 College of Medical Evangelists
1923 University of Nebraska College of Medicine.

Many of the remaining 71 schools believe that it is a fundamental error to certify as to the quality of work done under conditions impossible of close and exact control. No schools at the present time are able to provide interneships for all graduating students in university hospitals where such control would be adequate. Such interneships would undoubtedly be satisfactory. The remaining students must take interneships in hospitals where, although they may be affiliated with the medical schools, the control of a student's work can but be superficial. They consequently decline to accept the responsibility of certifying work done under conditions over which they have such slight control and believe that medical schools should not consider the interne year as part of the curriculum.

The originally simple contract between medical graduates and hospitals, which had been modified in some instances by the action of certain medical schools through the requirement of the interne year, was further complicated by the enactment of a law by the State of Pennsylvania in 1914 requiring that an applicant for license to practice medicine shall have completed a year as interne in a hospital of at least 25 beds.

Since 1914 nine other states have adopted this requirement.

1916 New Jersey
1917 Alaska
1917 Rhode Island
1918 North Dakota
1919 Washington
1922 Illinois
1922 Michigan
1923 Iowa
1924 Texas

The specific requirements of the Pennsylvania law, which may be taken as an example, are:

1. Amount of work. A hospital shall have at least twenty-five beds to each interne.
2. Diversity of work. A hospital shall treat medical, surgical, gynecological, and special diseases. Credit is given for work in special hospitals.
3. Maternity department, or coöperation with one.
4. Clinical laboratory, proportionate to the necessities of the hospital.
5. Records, well kept, showing evidence of the work being done by the interne in the departments.
6. Department of anesthesia, with competent supervision over all anesthesia given in the hospital.

The requirements of the state licensing boards differ in several particulars from the schedule of essentials for hospitals approved for internes as set forth by the American Medical Association Council and the standards required by medical schools. State laws are also inflexible and there is slight opportunity for interpretation. It is possible, therefore, for the graduate of a school requiring the interne year to *still* be refused license in these states, because of failure to comply exactly with the individual state laws.

The licensing boards of the other 38 states either take no stand regarding a required interne year or are opposed to it. Those opposing it feel that a license to practice medicine should mean that a specified amount of instruction has been properly given and that the required examinations have been passed; that such a license cannot certify and should not be interpreted as certifying the ability or competency above a minimum that will protect the public. Outside of university hospitals, they believe there are very few hospitals in which the interne receives training sufficient to consider his time profitably spent. They do not believe it necessary to extend medical instruction another year and suggest that the time in the present four-year course be more fully utilized and the long vacation employed to a better purpose. The secretary of one board says, "I am quite certain that the board will not accept as any part of the requirements for admission to the licensing examination, any work done in hospitals as they now exist throughout the country outside of those which are under university control."

The American Medical Association Council, the medical schools, and the state licensing boards all disclaim any implication of criticism in not approving a hospital for interne training, contending that a hospital may properly fulfill its duty to the community and at the same time be unsuited for teaching. It may be too small, it may care for only one special class of patients, its staff organization may be unsuited, it may lack certain departments and laboratories, to provide which might be to install unnecessary equipment at a prohibitive expense. Such institutions are advised to employ residents with salaries rather than to try and qualify as suitable hospitals for interne training. All this is sound and reasonable.

The situation is at present as follows:

General agreement by hospitals, medical schools, state boards and students that an interne training is desirable. Requirement of such training by 11 schools and 10 states, the offer of suitable interneships by 650 hospitals, and the acceptance of these interneships by 95 per cent of the students graduating from medical schools each year.

An agreement must be reached upon the following points:

First.—Agreement as to what shall constitute an acceptable interne service, which includes (a) the length of service, which now ranges from 6 months to 2 years, with the average at one year. (b) The form of service, whether it should be a rotating service embracing medicine, surgery, maternity, and laboratory work, or a non-rotating or continuous service spent in one department of medicine.

Dr. John M. Baldy, ex-President of the Bureau of Medical Education and Licensure of Pennsylvania, believes "a basic interneship grossly divides into four divisions—the laboratory service, the medical service, the surgical service, and the obstetrical service. The service should be a rotating one, the interne rotating from one department to the other. The service in the laboratory should be exclusively a laboratory service . . . There should be a minimum of 25 beds per interne in the hospital. This would allow a hospital with a capacity of 75 beds to be classified as being competent to give reliable interne service, as the laboratory interne does not encroach upon the average of 25 beds, which average would still obtain as far as the other three internes are concerned."

Dr. John M. Dodson of Rush Medical School says: "The growing tendency in the best hospitals is in the direction of a continuous service for a year in one department. When this change was made in the Presbyterian Hospital in Chicago, I realized that it was inevitable because long continuity of service is unquestionably in the best interest of the patient and contributes greatly to the comfort and efficiency of the staff. I felt however that it was an unfortunate change for the interne . . . After observing the results, I am convinced that it is much better for the interne to confine his work to one department for a full year or at the very least for nine months, rather than to go bobbing about from one service

to another every few weeks. Only by remaining in one service long enough to become really efficient and well trained in that line does he secure the maximum pedagogic value from his hospital service. Of course he ought if possible, to follow a year of surgical service by six months or a year on the medical side, or the reverse."

And so the matter rests.

Second.—Agreement as to how the interne year should be controlled. Shall it be left to the hospitals, shall it be controlled by the Licensing Board, or shall it be made an integral part of the medical curriculum by withholding degree until its satisfactory completion.

(1) Medical schools feel that they can best control the interne year and do so by withholding the M.D. degree until completion of a satisfactory interne service. (2) State boards feel that they who are responsible for the adequacy of the scholastic education of the applicant for licensure, should also have the determining voice in the type of efficiency of the interne course, and do so by stipulating what constitutes a satisfactory interne service. (3) Dr. Metzger of the Pennsylvania State Board takes an optimistic view of the situation and says: "Herein lies a disagreement between boards and some colleges which is more apparent than need be actual. By a common agreement on the essentials in interne requirements, these two administrative forces may readily and effectively act in unison. Since additional states are rapidly adopting the fifth year, and since hospitals are earnestly seeking to comply with the standardizing requests, these basic problems should be definitely solved. A more or less uniform course, similar to that in medical schools, should be advocated for hospitals desiring the privilege of giving this fifth year in medical education." (4) Some hospitals do not desire internes. Some hospitals are recognized by all, even themselves, though it may be relunctantly, as unsuited for the training of internes in the true sense. These may be considered as outside of the discussion.

Such hospitals as desire internes must provide reasonable return for the service of the interne and on the whole they have accepted the efforts of the American Medical Association Council in preparing an approved list as unprejudiced and is intended to be for the good of the hospital as well as for the good of the interne.

Hospitals feel however that they must retain the right to examine, choose, and appoint internes regardless of the regulations of schools or boards, because they must according to law show proper care in the selection of staff and employees, and also in order that they may retain proper disciplinary powers.

Third.—Agreement as to the best means of diminishing the present shortage of internes and of supplying the increasing demand. (a) Shall the length of some services be increased so that a larger number of students shall serve a longer period? (b) Shall a resident service be formed with promotion of selected internes? (c) Shall 4th-year students be used as internes? (d) Shall practitioners seeking post-graduate study be used as short-time internes for special service? (e) Shall non-medical aides be used to relieve internes of certain portions of their present duties?

To solve this problem it is necessary that all concerned approach the question in a coöperative spirit and reach agreement upon standards and methods. That standard and method which is for the best interest of each is by that same token for the best interest of all.

This is the problem presented to the Interne Committee of the American Hospital Association and upon which they hope to be able to make some helpful recommendations next year.

CHAIRMAN MACEACHERN: We will turn the meeting over to Dr. Frank D. Jennings of Brooklyn, Visiting Surgeon, St. Catherine's and Greenpoint Hospitals. Dr. Jennings has a very interesting number of topics for discussion.

(Dr. Jennings takes the Chair.)

CHAIRMAN JENNINGS: The first topic is captioned, *Difficulties Encountered in Staff Organization.* The explanatory matter follows on your program: "We adopted hospital standardization some time ago, but are finding it difficult to secure regular attendance and satisfactory discussion of the work. What can be done to stimulate better attendance, greater interest, and more thorough discussion of the work?

The discussion will be opened by Dr. Charles A. Gordon of Brooklyn, Clinical Professor of Obstetrics and Gynecology, Long Island College Hospital.

CHARLES A. GORDON, M.D.: The staff conference is without doubt the most important single factor in the standardization program of the American College of Surgeons. Without it, reform is possible, but nothing permanent can be accomplished unless we have the active coöperation of the professional staff. Medicine is essentially individualistic and doctors in their care of the patient and in their relations to the hospital group never lose that feeling. The staff con-

ference owes its strength to recognition of that fact, for there the doctor is continuously impressed with a sense of his own personal responsibility.

We are concerned here with the essentials of success, and factors of interest in the staff conference. I would like to submit the following suggestions:

(1) There must be a staff conference committee, composed of the very best men on your staff, men of integrity, activity, ingenuity, originality; men who have full authority in the record room to secure any data, examine any record or do anything they deem wise for the improvement of the professional service of the hospital.

(2) Staff conferences must be conducted with suitable dignity in a good room with proper light, the necessary equipment, such as a desk for the chairman, a blackboard and a lantern. The chairman must be active, a good leader and presiding officer, for upon him much depends for a successful staff conference.

(3) The subjects must not be anything you please, not at all. Perhaps it would be well to call this conference, as Dr. Dickinson does, staff review. It consists of a review of patients treated in the hospital for a given period of time. It is not in any sense a clinical or medical meeting. It is a study of results of treatment. If this review is conducted simply as a statistical analysis, it will diminish in popularity and fail to accomplish the really desired objective.

(4) Have the monthly analysis of the work on the blackboard, so that the chairman can point out things of interest and call attention to the salient facts of the analysis. Do not let the meeting last too long; start it exactly on time, and let that fact be known.

(5) Announce the best record for each month by name. Announce the worst record for each month, not stating the doctor's name, as the doctor whose record it is will recognize it. Submit that record for free criticism of the management of the case and the record in general.

(6) Have frequent studies, cumulative summaries of wound results, with the names of the doctors and statements of all the factors concerned in the case. Have frequent studies of any series such as hysterectomy, cholecystectomy, still-births, pneumonia or other series from time to time. Announce in the call of the meeting that some special subject will be under consideration. Have a report of occasional investigations of laboratory accuracy or the diagnostic success of your X-ray department. For instance, so many cases X-rayed in the X-ray laboratory came to operation or autopsy; in a certain percentage so many were right and so many were wrong.

(7) Publish monthly a percentage count, a score card for every man or every service. If your men or services are too numerous, publish them as one, two, three, the best man or the best service in your hospital from the standpoint of history, physical examination, continued history, operative sheets and number of autopsies procured; give the men a percentage rating for the number of autopsies they attend. It certainly is a shame for some men to get autopsies and have only two or three of the staff present. It is an index of the morale of your staff, your *esprit de corps*.

These are only a few suggestions. Many more could easily be brought out by the exercise of a little ingenuity. Try first one and then another, for the staff conference must be made interesting and magnetic. If it isn't, it will not survive and it *must* survive and progress, for stagnation means sterility.

CHAIRMAN JENNINGS: I will ask Dr. Felix P. Miller of El Paso, Surgeon, Masonic and Hotel Dieu Hospitals, to tell us something about the *Agenda for Staff Conferences*. His remarks and those of Dr. Gordon will then be open to you all for discussion.

FELIX P. MILLER, M.D.: The movement for hospital standardization has for its background the sincere desire of the profession for the best service to every patient. For the past ten years this ideal has had the support of the scientific, business, and professional men of America, under the able leadership of the American College of Surgeons. It now has the approval of the public wherever its essential principles are known. It has succeeded.

Apathy, ignorance and selfishness are the only enemies that make the staff conference inefficient. Every individual and every institution that has embraced the opportunities offered by this movement have been benefited. The minimum standard is as simple as the moral code and much easier to follow.

One of the absolute essentials of the plan is staff organization. I would say that the fundamental principles underlying a good staff organization vary but slightly, according to the nature and work of the hospital. Necessarily there

should be a "closed staff" for teaching and charitable institutions, with provision for "associate staff." "Open staff" for general hospitals may be further divided into such groups as "regular staff," "visiting staff" and "consulting staff."

The "staff membership" should be limited to those physicians, selected by the governing board of the hospital, who are competent, upright and sincere, frank in all their dealings and exact and punctual in all their performances. They should be willing to live in strict accord with all the principles, declarations and regulations of the plan of standardization.

When the governing boards of hospitals recognize that the staff can only measure up to its weakest members, they will select a smaller competent group who are willing to place the welfare of the patients above everything else. They will leave the "visiting staff" open to those deemed worthy and from which they may later fill vacancies when they occur. "By their records they will soon know them."

When the directing boards are functioning as they should, insisting on all the details and demanding the proof of the performance of this each month, then the plan will be what I believe its founders intended it should be—"a high ideal of hospital service, a vision of community responsibility, a method by which responsibility can be met efficiently day by day, a mighty and beneficent influence to humanity."

The agenda for the staff conference or review should include the following:

> (a) Analysis of work of hospital for past month or period under review, with special consideration of (1) agreement of diagnoses; (2) number of consultations held; (3) infections occurring in hospital; (4) deaths; (5) unimproved. (b) Patients in the hospital, with particular reference to complications, intricate diagnoses, etc. (c) Reports of committees on diagnostic and therapeutic departments, such as clinical laboratory and X-ray. (d) Recommendations for the good of the hospital and improvement of professional services.

CHAIRMAN JENNINGS: This is now open for discussion. I am sure that all of you must have thoughts on matters so important as the staff organization and staff meeting.

J. A. MACMILLAN, M.D. (Detroit, Michigan): I wish to state my belief in and appreciation of these very terse remarks.

One thing we have adopted in our staff conferences is the sending out of letters inviting all doctors to attend, even if they do not belong to the staff, but have used the hospital by sending in patients. We find this has a very beneficial and stimulating effect upon the staff.

I would also like in some way to modify one of the statements of the first speaker in regard to making the contest rule too sharp. I think probably it is better not to mention the names of even the doctors who are the most successful. I think that just as he said about the unsuccessful doctor, the successful doctor also would be perfectly able to appreciate that he was the one who made the great success, and as these things are sometimes only rather temporary successes, I believe it is sometimes an unfortunate proceeding to break into sharp contest among the members of the staff.

CHAIRMAN JENNINGS: Is there any further discussion? This is your opportunity.

If there is no further discussion we shall proceed to the second caption, *Hospital Rules and Regulations*. The discussion on this very important matter will be opened by Dr. John Jennings of Brooklyn, Clinical Professor of Surgery and Gynecology, Long Island College Hospital, and Surgeon, Brooklyn Hospital.

JOHN JENNINGS, M.D.: The Chairman has asked me to discuss the question: "Our hospital staff adopted by unanimous vote a set of by-laws, rules and regulations, including an anti-fee-splitting clause. Is it customary for each member of the staff or each doctor attending the hospital to sign these individually?"

I am able to answer rather promptly from my own point of view, which I think is perhaps a good way to start the discussion. It seems to me that the members of the College have all signed pledges, at least one pledge with regard to fee-splitting. To ask that this be repeated, in my opinion, is unnecessary.

So far as the hospital part of it is concerned, great opportunities remain for the establishment of a strictly non-fee-splitting morale throughout the country. The hospitals may fall readily into two groups, the first group being made up of hospitals which are under control of lay boards or of mixed lay and professional boards, hospitals in which the surgeons hold their appointments, their privileges, their rights to take care of the patients from these lay boards. These boards are responsible for the morale as well as for the efficiency of the men who work in their hospitals. They should be held responsible and their responsibility should be placed in such a way that they may seriously realize what it means and live up to it.

In the smaller hospitals, hospitals of a different type, open hospitals, private hospitals—we might say miscellaneous hospitals—it would seem a very wise thing to induce the men who have not already signed proper pledges to do so. I personally can see no reason why any one should object to signing such a pledge, whether he is a member of the College or not.

I would like to speak a moment with regard to the fostering of the non-fee-splitting morale. I doubt very much if signing anything will make much difference to the man who is a fee-splitter. I believe that the important thing is to foster in each community the ethical sense that fee-splitting is wrong. If, as you and I have said on paper, we believe it to be wrong, then let us stress that point of view and endeavor to impress upon our neighbors, our friends, our fellow-physicians, and the laity, that it is wrong. Let us do what Dr. McKenzie so well said he had done this morning in the town he described to us: let us foster solidarity among ourselves and let us realize that the conspiracy of silence with regard to fee-splitting must be broken.

If we are to educate the public we must have publicity; and publicity, education, solidarity, good-fellowship and loyalty are the cure in my mind for fee-splitting.

EDITOR'S NOTE: The transcript of proceedings submitted by the official stenographer shows considerable discussion on fee-splitting, due, possibly, to misinterpretation of the topic or question under discussion, which refers only to what the prevailing custom is in regard to the signing of the staff rules and regulations by each doctor privileged to practice in the hospital. As the discussion of several speakers was irrelevant to the matter under consideration, it has been omitted in this final draft.

In the editor's opinion, all staff rules and regulations should be:

First—Formulated and approved by the medical staff of the hospital;

Second—After this they should be submitted to the Board of Trustees or Management for approval or otherwise;

Third—When approved by the Board of Trustees or Management they should then be adopted by the staff and signed by each member or doctor privileged to practice in the hospital.

CHAIRMAN JENNINGS: The fourth topic, *Responsibility for Case Records*, was assigned to Dr. George W. Swift of Seattle, but he is not here. I will ask Dr. MacEachern, Director of Hospital Activities for the College, to take up this question for us.

MALCOLM T. MACEACHERN, M.D.: The topic for discussion reads as follows: "A hospital has difficulty in the securing and supervising of records. (a) Who should be responsible for this? (b) What are the various methods in use for the securing of records?

The case record is a composite manuscript resulting finally from the assembling together of a number of units or parts contributed from various sources—the physician in charge of the patient, the interne, the consultant, the pathologist, the radiologist, the physiotherapist, the anæsthetist, the operator, the nurse, and all others who have contributed information and effort in the application of scientific investigation or treatment. All these parts, when secured and coördinated, should produce a logically arranged and complete account of the patient, setting forth history of illness, investigations made, treatment applied, with progress and final results. There are, therefore, several persons who must share the responsibility in the production of the case record. In this connection I would like to quote here two paragraphs from a Bulletin of the American College of Surgeons on Case Records, which read as follows:

"Who is to be responsible for hospital records? The old saying that everybody's business is nobody's business applies to case records. If the records are worth keeping and if they are worth keeping so that their contents are available for study and review, then somebody must have charge of them; somebody must check them up, see that they are all promptly complete, conveniently accessible, and protected from misuse. In a small institution, not oversupplied with funds, it may be wise to double up on duties in this matter. The person who keeps the records may also have other things to do, perhaps in the receiving room, or in the bookkeeping department. But in a hospital of considerable size, and especially in a hospital of great earnestness, the records are the sole responsibility of one person.

"Supervision of records usually falls to a woman; and if the woman is competent, it may be understood at the outset that she will not be popular for a long time at least with those for whom she works. She will be a nagger and a nuisance to those who are indisposed to keep up to the hour with their records. She will have to appeal to the doctors, and sometimes appeal over the heads of individual doctors to the staff as a whole. But by insistence upon performance of duty, the record keeper will ultimately win the hearty good-will of the staff and render also a service mightily worth while."

In the final analysis, however, no person is in a better position to assume individual responsibility for securing and supervising the records than the doctor himself who is attending the patient. He is primarily the person who should know whether or not all the data have been properly recorded, are complete in detail and are of good quality. Therefore the hospital and the physician, jointly, must share the responsibility for a good case record. In addition to all this, the hospital should have the active support of a competent committee from the staff to appraise from time

to time the records and system carried on. Finally, the hospital deserves the support and interest of the entire staff in the matter of producing good case records and, indeed, discussion of this should constitute an important matter at the periodic staff conference.

There are several methods in vogue for the securing of records in hospitals. The following are in common use:

(1) The doctor in charge of the case writing the record himself, dictating it to a stenographer or through the dictaphone;
(2) The interne writing the record;
(3) A combination method, where a record clerk or nurse trained in this work secures the history under the supervision of the doctor in charge, who adds his physical findings.

The method adopted in any particular hospital depends on local conditions, and, therefore, each institution should have individual consideration. No common method or procedure can be laid down for all hospitals to follow alike.

CHAIRMAN JENNINGS: The next discussion is in regard to *The Chief Surgeon and the Keeping of Records*. This will be opened by Dr. George H. Murphy of Halifax, Nova Scotia, Professor of Clinical Surgery, Dalhousie University Faculty of Medicine; Visiting Surgeon to the Victoria General Hospital.

GEORGE H. MURPHY, M.D.: This question reads: "We have a hospital which has been on the approved list for three years. We have no internes. Our chief surgeon, claiming to be too busy, declines to write his records or supervise the writing of them. What should the hospital do in this case?"

I must deny the premises here because I do not think there is any chief surgeon who has not time enough to devote at least a small portion of it to the production of records, or at least the supervising of same.

If you will permit me to deal specifically with this proposition as I understand the question, it would seem that there is a lack of harmony prevailing in this particular hospital, and I would be inclined to think that this is due either to the lack of staff conferences or to an improper type of meeting.

As a remedy for such a condition (speaking from experience in the province from which I come, where we have a large number of small hospitals without internes), I would venture to suggest that this difficulty can be readily overcome by establishing proper meetings in the hospital in question. I would further suggest that a joint staff meeting, together with the management of the hospital, be called, and that the fundamental ideas of standardization of hospitals be discussed. Perhaps it would be possible to bring this refractory surgeon to a meeting such as we have here today. An understanding should be obtained between the management and the surgeon in question. It might be suggested to him that he be helped out in various ways. I think, under the conditions prevailing in this hospital, the history should be taken either by the surgeon himself, by his assistant or by some one under his supervision. I think the operating room record, the pre-operative diagnosis, which I consider very, very important, could be taken by the nurse in charge. The report of the operation can be made by the anæsthetist. The filing of other details in connection with the record can be carried out by detailing a nurse in the institution. If this surgeon will not agree to such a plan as that, then I really do not know what can be done. The forces of the American College of Surgeons must deal with that. Dr. MacEachern will have to handle that question himself, I suppose. I believe that the matter can be adjusted by a harmonious staff meeting at which the management of the hospital will lay down firmly and distinctly the requirements of the minimum standard as outlined by the American College of Surgeons.

HENRY F. GRAHAM, M.D. (Brooklyn, New York): I hope that after the big and splendid things the American College of Surgeons has accomplished in the way of records for our hospitals, the next step will not be degeneration to a small and picayune attitude toward these hospital records. It seems to me that a man should sign his case record after it is all finished; his history and operation written, his diagnosis down, and his stamp of approval on that particular record. I think that if he has to sign each individual sheet, sign the operating sheet, sign the physical diagnosis, sign the history and everything in sight, by the time he gets through signing everything, he has forgotten to take care of the patient. I have seen that very thing done in our own hospital. It is just a little point that I want to bring to the attention of those who are in charge of this work in Chicago.

[illegible]
sheet.

ERNEST LEROI HUNT, M.D. (Worcester, Massachusetts): There is one suggestion I would offer to help the hospital which is having the difficulty mentioned. The summary card is a mighty use-

ful feature. If I could not get good records fully and completely filled out, I would rather just have a summary card with each item called for filled in properly. These items are, mainly: the pre-operative diagnosis, the anaesthetic, name of the operation, the operative and pathological findings, the complications, final diagnosis, condition on discharge and what disposition was made of the patient finally. These are the high spots, and every one is very valuable. This takes practically no time to write down. I fully believe that a carefully kept brief summary would be much better than a poorly kept set of records.

The problem of the chief of service who will not attend the staff meetings, or who will not coöperate in getting records, is one that I think we are all up against, perhaps not very severely, but still it is a problem in many places. My own belief is that no matter how valuable that chief of service is, the hospital would be better off if he were asked to resign, unless he will coöperate.

EMERSON F. ROOT, M.D. (Salt Lake City, Utah): I do not believe any man is too busy to make a record. If he is so busy that he cannot make up a brief, terse record, he will find that he is altogether too busy when the time comes when that record is needed. What I refer to is just this: every word pertaining to the record of a case may be necessary to protect the man who has charge of the case. It may be necessary to protect the hospital in which he works. It may be necessary to protect the patient. Therefore, no word should be left out of the hospital record. No man is too busy to do that.

An insurance company may save itself a great deal of trouble by a few simple words written on the hospital record. The doctor may save himself a lot of money and trouble later and a lot of notoriety by writing a few words on the record. It takes no time. I know that it can be done, and the doctor should by all means do it. Old men can do it easily; young men *must* do it.

HUDSON TALBOTT, M.D. (St. Louis, Missouri): Speaking on this question, it is a little hard for me to visualize a hospital on the approved list having no internes and a chief surgeon who does not write his histories or have them written. However, I take it that it is true, and I would suggest that this surgeon be sent to school, have him attend a few sessions of the American College of Surgeons and hear the histories that are read at those meetings. If they will get him to attend such a conference as this and follow it up by having him go to Milwaukee next week to the American Hospital Association meeting, then I am sure he will be filled with the conviction that it is necessary, if he would do good work, to be able and willing to at least write a history. I do not believe that any surgeon can do really first-class surgical work if he is unwilling to take a little time to make a record of his findings and his procedure.

MRS. G. S. HIPKE (President, Maternity General Hospital, Milwaukee, Wisconsin): I want to take this opportunity to express my appreciation to the American College of Surgeons for what they have done for us. We were a struggling institution, we were afraid to close our doors to the men who would not write their histories, keep their charts up, or conform to requirements. While we feel that the American College of Surgeons is our guardian angel, in the hospital itself we make it the goat, in that when a man does not keep up his records as he should we say, "You want to be connected with an approved hospital and, of course, this hospital cannot be an approved institution unless you do your duty." A man who does not keep up his records as he should is invited to take his cases elsewhere, and we thank the American College of Surgeons for this.

JOHN B. MCKENZIE, M.D. (Logieville, New Brunswick): Speaking of the busy surgeon—the picture is a small hospital in a small community. The remedy, to my mind, is education. Educate the public as to what hospital standardization means and requires; make the public know that when they go into a hospital it must be a good hospital, and the surgeon will find that if he is going to practice in that community he will have to meet the requirements.

CHAIRMAN JENNINGS: The next problem is under the caption, *Access to Patients' Records*, and the discussion will be opened by Dr. Edward Evans of LaCrosse, Wisconsin, Surgeon, St. Francis Hospital.

EDWARD F. EVANS, M.D.: I would like to digress a moment to inquire of this audience if you realize this afternoon the brilliant operation you witnessed by Dr. Codman when he stripped the cobwebs of self-complacency from our conceit and showed us ourselves in our naked hypocrisy, which is very often the position we are in but do not acknowledge it.

"Is it allowable or advisable that any person other than the hospital superintendent and the doctor in charge have access to the patients' records after leaving the hospital? A staff committee examines, prior to the staff conference, all the records of patients after discharge, but objection has been raised to this procedure by some of the attending doctors." Inasmuch as one of the

requirements for hospital standardization is that proper records of all patients shall be kept in the hospital, the American College of Surgeons recommends that the standardized hospital have a committee which examines the records from time to time and checks up on the members of the staff who are not complying with this request. This is known as the record committee. They should see that all members of the staff are complying with the requirements in this respect.

I do not see very well how any members subscribing to the requirements of standardization can raise objection to such supervision. Ethically, of course, all information given to the doctors by the patients or acquired by the doctor on physical examination of the patient, is sacred and is inviolable. As a matter of fact, however, in our hospital this secrecy is not possible. The interne or some of our associates more often than the physician or surgeon himself takes the history. Nurses are constantly present during examinations, and often take notes for the doctor and, of course, receive orders for treatment. The record nurse has constant and free access to the records. Consultants often discuss cases with each other, so, as a matter of fact, there is not absolute secrecy about records in a hospital; yet I have never known of a case where a patient felt that he or she had been injured or their confidence abused by the above procedure. We cannot, of course, conceive of such a case, and I doubt very much if we would not be liable for any information that might leak out from the hospital derogatory to the well being of the patient; but things are as they are, and in hospital practice I do not see very well how they can be otherwise.

This being the case, while the patient is in the hospital, the only question is, is any confidence betrayed by allowing others to see the records after the patient leaves the hospital? To me it appears like setting up a man of straw to knock down in raising this question. Any doctor worthy of a position on a staff would not, I believe, seek access to records of another physician except with said physician's knowledge, and I am sure that any member of a staff would have no just reason for refusing such information to the person seeking it, provided he was at the time in attendance on the patient whose record was asked for.

With our shifting population, both as regards location and medical attendant, I am sure all of us are being constantly asked for records of past illnesses and treatment of patients no longer in our charge, because of change of location or change of physician. Personally, I see no problem in the matter, remembering always that we safeguard the trust placed in us by our patient.

Three thoughts I would like to leave with you this afternoon, which I think we should constantly keep before us. The first relates to the physician, whether he belongs to the American College of Surgeons or not. It is this: that it is time for us to give up the idea that our patients are our private property; rather it must be conceded that we are skilled, trained, educated people, licensed by the state to take care of the health of the community, and when a patient feels like going somewhere else, he has not outraged us in any way.

The two other points that I want to leave with you relate to the future welfare of the American College of Surgeons. A great deal is being said and done in the examination and inspection of hospitals in regard to the records and a great deal of stress is being laid on them. The point that I would like to bring before the College and those doing this work is that they look beyond the record to the doctor, and the second piece of advice I would like to tender is that in admitting men to the American College of Surgeons they look beyond the doctor to the man and then we will not have much talk about this fee-splitting. As Dr. Sherman of San Francisco said to me once, when speaking about the law we have in Wisconsin that any surgeon who divides fees or anybody bringing a patient to him who suggests a division of fees is guilty of a criminal misdemeanor and should have his license taken from him, "You can pass a law against lovers kissing behind a closed door, but I do not know how in the devil you are going to prosecute them."

J. Lawrence Evans, M.D. (Weehawken, New Jersey): I would like to know if the American College of Surgeons have any one to tell us about office management and accountancy work in hospitals, or has this been left entirely in medical hands. I have seen these records in a great many hospitals in the last year, and I find that the office management is very inadequate. There is a large hospital in Philadelphia that is well known, and it is very surprising to me that they have lost 285 records in the course of a year. This is not an uncommon thing in other hospitals. The records were actually lost. I would like to know whether the American College of Surgeons has taken the office management into consideration in working out this record system; whether a man has been consulted who understands how records should be kept. You know how the information must be put down, you know the medical and surgical data required. If you are going to supervise what

goes in records you must go further and supervise more accurately how those records should be kept. I do not believe the average medical man is competent to install a system of records in a hospital. He knows the medical and surgical aspect, but office management does not come within his knowledge.

If a man who knows something about office management goes into the average hospital, he will find that the records are more or less of a jumble. I was an office manager myself for a number of years before I studied medicine and I know that records are woefully kept. An individual hospital may be able to find out what it wants to know, but the College of Surgeons must standardize this information so that the statistician can get the data he wants, which he cannot do today. Each individual hospital is running things its own way. The information may be put down as you want it, it may pass your inspection, you may approve the hospital, but if you do not have some person who knows office management or records, your system may not be as complete as it should be.

JOHN S. MCCONNELL (Samaritan Hospital, Philadelphia): May a staff committee examine a patient's records? Yes. Is it allowable or advisable that any person other than they examine them? No. Why? In a hospital that does, say, eighty per cent surgical work, one of the most embarrassing features of hospital administration is the constant request to see patients' records, from those who have no right to look at them. I refer especially to liability and accident cases in which the ambulance chaser and the lawyer, if he cannot do it himself, engages somebody, not a member of the American College of Surgeons, to seek the information. I cannot think of a single thing that the College could do that would more satisfactorily strengthen the hands of the superintendent who is administering a hospital in a large city, than to pass a rule that would prohibit anybody from the outside inspecting the records if they have no special right to do so.

I might say that we, in our efforts to secure some information concerning a patient who was being treated in our hospital, wrote through several channels and finally reached the Veterans' Bureau. We wanted information for a man who was in the hospital. The reply came back that the central division at Washington has ruled that the records were secret and private and that nobody should have access to them except the principals, i. e., the patient and the physician. We immediately adopted that rule with this amendment, however, that where the patient could not come in person, on presentation of a request over a certified signature, we would give the information. I think that is a measure in which you can help very much the administration of hospital work, saving the time and energy of your superintendents and protecting them on that one point.

F. P. CORRIGAN, M.D. (Cleveland, Ohio): Just as Dr. MacEachern stated, that the sole responsibility in the last analysis of securing the record lies with the physician or surgeon in charge of the case, so the safeguarding of that record is his responsibility. The Academy of Medicine at Cleveland passed this question up to Squires, Sanders and Dempsey, one of the leading law firms, and they ruled absolutely that it is a confidential record between the physician and the patient in charge of the physician. The matter of safeguarding that record is the duty of that physician and it is a confidential record and must so remain between the patient and his physician.

CHAIRMAN JENNINGS: Was that an interpretation of the Ohio law?

DR. CORRIGAN: That is an interpretation of the Ohio law by Squires, Sanders and Dempsey.

ST. ELMO SANDERS, M.D. (Kansas City, Missouri): In our hospital if we think they are covering up fraud we let the records out. For example, we have a great number of cases coming to our hospital that have been injured slightly; they go away and sue somebody for twenty or fifty thousand dollars damages. We have released those records and settled several damage suits in that way. I believe the hospital is justified in any way in releasing a record that is covering up a fraud.

W. H. CONLEY, M.D. (Metropolitan Hospital, Welfare Island, New York): In New York City the law is the same as in Cleveland. The record cannot be looked at by anybody except the physician. In case anybody wants to see a record, he must supply the hospital with an affidavit stating that such-and-such a lawyer has been retained, and then we can give him a copy. Otherwise, the only way is by subpoena, which demands that we must furnish the court with the record or copy of same.

M. T. MACEACHERN, M.D.: Suppose a resolution were passed unanimously that the staff committee should have access to the records. Would that be allowable in your city under the ruling made? I am asking this for my own information; I want to know personally.

W. H. CONLEY, M.D.: We do that in our staff conferences. That would be allowable under the

law. The committee goes over the cases and they present them by the initials or the number but not by the name itself.

CHAIRMAN JENNINGS: As a matter of fact, that is a departmental order in the Department of Public Welfare. Those staff meetings are held as a result of the departmental order.

M. T. MACEACHERN, M.D.: To sum up, I would say the record is confidential to the patient and the doctor, but can be produced by the court and seen by the record committee in the hospital provided the staff resolves that they are willing to adopt this procedure. If there is any reaction to this, please let me know. I am asked the question frequently. I, too, am after some light today on this question.

S. G. DAVIDSON (Butterworth Hospital, Grand Rapids, Michigan): There is another factor entering into the question that I think has not been brought out. The Boards of Trustees of hospitals have in the past few years been held responsible for malpractice on the part of certain staff men in the care of patients. If the case record is to be put into a drawer and locked up and nobody is to know whether a malpractice is being carried on by a staff man or not, where does the responsibility of the Board of Trustees rest?

J. S. WELCH, M.D. (Lincoln, Nebraska): I would like to ask, if the patient has been treated by a member of the staff, say Dr. A, and is later treated by Dr. B, whether Dr. B. has a right to the benefit of the history taken by Dr. A.

CHAIRMAN JENNINGS: If you are asking me personally, I think he has. What do you think, Dr. MacEachern?

M. T. MACEACHERN, M.D.: I am looking for light on that, too. Was it you who wrote me recently regarding this? I will ask Father Moulinier to answer that question.

FATHER MOULINIER: It is a big problem that we have been discussing. We have a new kind of hospital today and the hospital must assume the moral responsibility for all the records. If any man has in his record incommunicable knowledge, he must tell the hospital that it is his and no hand can be put on it, but if it does not contain incommunicable knowledge he must in moral obligation permit that knowledge to be communicated to a doctor, to the committee, to the record keeper, to the hospital, for the benefit of the patient. There is the whole basis of it all. The doctor's sense of responsibility for the secret is involved in the benefit to the patient, and if he thinks it is such that it cannot be communicated to anybody, there is no power on earth that has the moral right to get it from him, and your record keeping and hospital responsibility must recognize that. However, there is but one case of that kind in a hundred, in a thousand, and the communication of the record to the staff members in the hospital, as Dr. Evans has said, is just as sacred in the hands of all as it is in the hands of one.

C. L. GRABER, M.D. (Cleveland, Ohio): The practical solution of this problem is extremely easy. Whenever any one makes application for the record of some patient at the hospital office, all the office need require is that that person bring with him a written request from the patient that the record be submitted to him personally. If that person is an ambulance chaser, a lawyer, a neighbor, or another doctor, he cannot secure that record under any circumstances without the patient having signed a statement to that effect. This written request is left at the hospital and the problem is solved.

CHAIRMAN JENNINGS: The next proposition deals with the *Record Clerk, Clinical Laboratory and X-Ray Technicians,* and the discussion will be led by Dr. Edward A. Weiss of Pittsburgh, Assistant Professor of Gynecology, University of Pittsburgh School of Medicine, Gynecologist-in-Chief, Mercy Hospital.

EDWARD A. WEISS, M.D.: The following question has been sent in: "Our hospital has 150 beds and has just adopted hospital standardization with all its requirements. We are prepared to engage (1) a trained, competent record clerk, (2) a clinical laboratory technician, and (3) an X-ray technician. Can these duties be combined in one or two persons, or are the three necessary in a hospital of this size? Where can such people be obtained and what should they be paid?"

I may say that it is comparatively easy to discuss this from the ideal standpoint of any hospital, be it fifty or one hundred and fifty beds. There should be a highly trained and experienced technician in the department of roentgenology and the clinical laboratory and a trained worker in the record room. That is in the one hundred and fifty bed hospital. These associates should be engaged in addition to the chief in the department of roentgenology and pathology. The question presented is: "Can the duties of these three departments be combined or limited to one or two persons, and are these necessary in a hospital of this size?" It would be manifestly impossible for one person to perform the duties of these three departments. Any such attempt would mean superficial and inadequate work, and such a hospital would never be placed on an approved list. Whether two persons could take

care of the three departments depends upon whether these two individuals are highly trained, alert and willing to work long and hard.

In a great measure the success of the arrangement would depend also on the character of the work done in the hospital, whether surgical or medical. It would be impossible to discuss any phase of this subject in five minutes, and I can give only a brief personal opinion of the subject based on a questionnaire which was sent to forty-two hospitals of about 150 bed capacity. Practically all agreed that each department, the department of records, the laboratory and the X-ray, should have its own trained worker. Ten of the hospitals combined the X-ray and the record department, and eleven combined the clinical laboratory and the record department. Unless such a hospital can employ or secure the services of a full-time physician to care for the X-ray department as well as a full-time pathologist, it is absolutely essential to employ a full-time technician in both departments, and of this there can be very little question.

The record department is rather shunted from one person to another in the hospital, and while it is not the most important part from the patient's standpoint, it is one of the most important from the professional standpoint and from the doctor's standpoint. I emphasize that the record clerk, if well trained, can, with hearty coöperation on the part of the staff, in some instances combine other duties, such as part time in the office or the bookkeeping department. We do not say that it is ideal, but in certain hospitals where there are limited funds we sometimes must cut down on certain departments, and in that way we may possibly combine. Of course, it is not the ideal arrangement.

A plan which worked with some value and success in three hospitals which we consulted was a combination of the record clerk and the social service department, and in a hospital of moderate size a social service department is most advantageous and should be encouraged. Those two departments would work very nicely because we know in our follow-up work a social service worker is very, very important, and in all our hospitals the record departments must have a follow-up if they want to come up to our standards. If we must combine, I would suggest that in those small hospitals especially which are rather reluctant to employ a social service worker, they could very advantageously combine the social service and record department.

Another plan which has worked out satisfactorily in several of the hospitals consulted is to have an assistant director or directress of nurses act as a record clerk. Their argument is that in her capacity as assistant directress and instructor of nurses she has a direct interest and supervision of the nurses' records; furthermore, she comes in close contact with the physicians on their daily rounds and is thus able to keep clinical charts up to date and in order and can often complete these records before they reach the record room, rather than attempt to complete them after the patient has been discharged.

If that directress of nurses has not too much to do, the foregoing would be a nice arrangement, because we know that the time to complete the records is not when the patient is discharged, not when she is about ready to go home, but should be worked up some time before. Those of you who have had any work in the record room know what an extremely difficult task it is to get the physicians to complete their records and to sign their cards. You post notices in the staff room that such-and-such a physician is wanted to complete his record; you may do this day after day, and still he fails to show up. Some hospitals have adopted rather drastic rules for the enforcement of that, but we are speaking about the smaller hospital where they do not have possibly the same control that the larger one has. If such an assistant directress of nurses, who comes in daily contact on the ward, can keep after that doctor better than the record clerk, it may work out very advantageously.

I shall not attempt to discuss the salary which should be paid to a technician, whether in the laboratory or the record room, as a salary paid, in any field, should be commensurate with the services rendered.

The question has been asked, "Where can a person who is not trained in record keeping secure adequate instruction?" That is difficult. My own experience has been that the easiest and most practical way is to have this selected person, be she a nurse or a lay person, spend a month or more in the record room of a large approved hospital rather than attempt to secure her own system and make her own nomenclature. There is where the mistake is often made. A clerk from the office may be told, "You take care of the record room." That is unfair. She knows nothing about the standard nomenclature if she reads it. I always say it would pay the hospital to send her away at its own expense to a well-organized hospital and let her get training in a record room. I am sure every hospital of large size would be glad to do that for you. In the hospital with which I am connected, every two or three months

we have somebody come from the smaller hospitals and ask if they may have their record clerk come to get our system. We are always very glad to do that, and I am sure large hospitals will always be glad to do that. I recommend as a good solution that you send the person you want to take care of the record room to a well-regulated hospital which has a standard nomenclature in keeping with the American College of Surgeons.

CHAIRMAN JENNINGS: If there are no questions or suggestions, we will pass on to the next subject, *Routine Pathological Examination and Basis on which Charges Should be Made.* Dr. Charles E. Ruth of Des Moines, Iowa, is not present, and Mr. Robert Jolly will discuss this.

MR. ROBERT JOLLY: "In conforming with the hospital standardization requirements, we are putting through all the specimens from the operating room routinely. We are not charging our patients for this. I find some hospitals doing so. What is the usual custom as to charges? Should all tonsil specimens go through complete pathological analysis?"

In our hospital we have a flat rate of $3.00 for ward patients and $5.00 for room patients, and this covers the pathological tests that are to be made in the laboratory up to a certain point. When the value of tests made amounts to $15.00 we start over again and put another charge on them. We first started out by letting them go as far as they would, but some of you fellows just slapped on as many as you could; some doctor would come in every day and order a blood count; the patient might be in there twenty-four days and perhaps they would order a blood count every day. We found that some of the doctors did not look at the blood count after they ordered it, so we cut down. When the value comes to $15.00 we put on another charge; we go back to $3.00 or $5.00 on the same thing. Some of the patients kicked about that. They said, "We do not believe it is fair for you to put a flat rate like that on us," and some of the doctors said, "Here one of our patients comes in and does not have anything done and you make her pay $3.00 for it and another patient comes in and has a lot of work done, and that is not fair either." The very doctor who brought that up in the staff meeting that night happened to have a patient in the hospital, and I said, "Yes, Mrs. So-and-So has had $80.00 worth of laboratory work done. Suppose we charged her for what has been done." He backed off the boards then.

I said to them, "You both go down here and get on the street car and you each pay seven cents. One rides three blocks and the other rides three miles, and neither of you kicks about it. You think you got your money's worth, and you did." The fact of the matter is that everybody who comes to a hospital gets more than his money's worth. When you count up what one gets in a hospital compared to what he gets in this or any other hotel for $3.00 or $5.00 a day, you realize that.

Should all tonsil specimens go through complete pathological analysis? We send ours up, except in the case, sometimes, of little babies a year old or less. Sometimes we let those go by, but usually we send every one up there.

M. T. MACEACHERN, M.D.: In an analysis of one hundred hospitals, we find there are four or five ways of handling this: (1) charging so much per test or examination; (2) charging a flat rate; (3) free service either through endowed or public laboratory; (4) adding so much on to the per diem charges of the patient.

Of the one hundred hospitals analyzed, of one hundred beds and over, fifteen were on flat rate, fifty-seven charged according to a schedule of so much per test, and twenty-eight gave a free service, ten of these twenty-eight being so-called county institutions and the other eighteen charging nothing for their service.

All tonsils should be examined and described macroscopically and microscopically. If this procedure cannot be carried out in all cases, at least a gross or macroscopic examination should be made and properly recorded. A tonsil when sectioned, showing an organized inflammatory process or growth of any kind, should be examined microscopically in case we are dealing, for instance, with such conditions as carcinoma, tuberculosis, actinomycosis or gumma.

PHILIP HILLKOWITZ, M.D. (Denver, Colorado): The surgeons see this from their viewpoint, but I would like to discuss it from the standpoint of the pathologist as well as the patient, who, of course, is the one we have to take care of in the last analysis. Pathological examinations, as Dr. MacEachern remarked, are compensated for in different ways. It seems of the varieties mentioned, each one should be compensated for according to the work called for. Some of the laboratory work that is done in a hospital is susceptible of a flat rate, that is, routine examinations, and it should be considered as an axiom or as one of the minimum requirements that the technician should be under the supervision of a physician who is well qualified in laboratory work. Particularly is that true of pathological examinations of tissues. It takes just as much preparation and just as much preliminary educa-

tion to be able to diagnose pathological examinations as it does to perform surgical operations. The surgeons have wisely adopted a standard; pathologists are attempting to do the same thing. If you are going to socialize the pathologist by doing that on a sort of flat rate, the result will be (and it is already being shown) that the pathologists will step into other callings, into that of surgery or internal medicine for which they are prepared, and the very object for which standardization has been brought about, in order to follow up the work of the surgeon, will be completely nullified. Hence I would say that in order to carry out this work it will be absolutely essential that the patient pay for pathological examinations of tissue. It should be obligatory and part of the hospital requirement.

Just a word about tonsils. I am sorry that I have to differ with Dr. MacEachern on this matter. If you leave a loophole for tonsils we know exactly what the nature of the surgeon is, with all due respect to him; also we know many pathologists will confess that they are not able microscopically to make the diagnosis of tonsils and that a microscopic examination is not necessary. I would, therefore, advocate not letting down the bars in these cases. Insist that there shall be a macroscopical and microscopical examination of all tonsils.

JOHN S. MCCONNELL: At our hospital we make a flat charge of twenty-five cents per day to all. You would be surprised at the difference in our accounts. Of course, that does not include special things, but for the general routine, twenty-five cents per day is charged to everybody who comes in the hospital, whether they have laboratory work or not.

H. J. GOECKEL, M.D. (Plainfield, New Jersey): I chance to have charge of the laboratory in a hospital which averages 101 patients a day, 3,200 cases a year, of which 1,900 are surgical. If we were to really do what we should on surgical tissue, it would well take up a technician's and a pathologist's time. The point which I want to know is, should the laboratory center on this postoperative work, or, where there is a limited force, should we center on diagnostic work to establish a diagnosis before operation? That is what I want to know. I think the College ought to take the matter under consideration to properly separate the tissue department from the other departments in order to do justice each way.

ELIZA R. MORSE, M.D. (Chicago, Illinois): I think there is as much difference in charging a flat fee for laboratory work as there is in charging a flat fee for surgery. We have a differential fee. I believe in charging the patient a fee for everything we do in the hospital. They do that in the Mayo Hospital laboratory. If the patient is unable to pay for it, charge it to charity. More charitable work is done in the laboratory than any other place in the hospital. If the patient is not able to pay more than $3.00 for $80.00 worth of work, give that patient the work for $3.00 and credit the hospital with $77.00 worth of charity work. Most hospitals want to increase their charity work anyway.

Several years ago I reported a paper of some 200 groups of tonsils. There were some four to five per cent of cases of tuberculosis undiscovered by physical diagnosis before the removal of the tonsils by the surgeons. No cases of cancer were undiscovered, and I do not think there will be. I think you will find that most cases of cancer will be discovered before the tonsils are removed. There are no cases of actinomycosis, pure, in the human tonsil. I do not think sectioning a tonsil will tell you anything about gumma. You have to make a histological examination just as you do for other tissues. I agree that we ought to examine *all* the tissues, and if we cannot charge as much for tonsils, make the charge for the tissues correspond with the charge for the operation.

M. T. MACEACHERN, M.D.: I will accept the recommendation of the people who know best. I think that is a very good point.

CHAIRMAN JENNINGS: The next subject is *Location of X-ray and Clinical Laboratory with Relation to Service.* Dr. Robert T. Schultz of Chicago is not here. May I ask Dr. MacEachern to tell us about this, too?

M. T. MACEACHERN, M.D.: It is desirable to have the pathological laboratory and X-ray department in close proximity to the operating room if possible. There are many good reasons for this suggestion though perhaps some objections can be raised.

In all phases of hospital work we should always aim at promoting coöperation. Team-work among the surgeons, physicians, specialists, consultants or others practicing in the hospital means greater efficiency every time.

The surgeon becomes a better surgeon by closer association with the pathologist and radiologist; the pathologist and radiologist become more efficient in their own particular line by closer association with the clinician. Make your pathologist a clinical pathologist and your radiologist a clinical radiologist rather than mere technicians in their respective departments.

The surgeon should have the services of the pathologist at his elbow when operating, if so

desired. He should always be an available consultant. The surgeon should be privileged to examine the specimen macroscopically and while in a fresh state, with the pathologist and under his direction. Later he should have an opportunity to see the sections and study the microscopical aspect of the tumor or specimen. The surgeon, the physician and others practicing medicine should keep up their clinical pathology.

Likewise, the radiologist must have the privilege of following his work to the bedside or the operating table in order that he may check up his conclusions with the clinical findings in the case. It is also desirable that the clinician examine his own plates in consultation with the radiologist.

Let us, therefore, promote better team-work between the clinician on the one hand and the diagnostic departments on the other.

For the convenient handling of certain types of cases the X-ray department should be near the operating room. I refer especially to fracture and genito-urinary work. Transportation of such cases for X-ray investigation is sometimes detrimental to present conditions.

ELIZA R. MORSE, M.D.: I do not agree entirely with what Dr. MacEachern has said on this. I think the idea of putting the laboratory on the top of the building and keeping the pathologist away from the rest of the staff is bad. The pathological laboratory should be right across from the room where the doctors hang their coats. Any pathologist who does his duty will have at least half of the staff daily in to see him about their cases. We are not talking about pathologists who do autopsies only and are excluded to the medical schools, but I refer to the pathologist who works with the surgeons and physicians. The duty of the pathologist is to stimulate the entire staff. The laboratory is the very center of the hospital, and the pathologist should be the man who is pressing on the nerves of all that staff to assist and stimulate each member. Therefore, I think the laboratory should be on the first floor where the doctors can come in, use it, and get all the information they want in their work.

CHAIRMAN JENNINGS: This concludes our Round Table Conference, which I feel has been most interesting and instructive. Its success has been entirely due to your whole-hearted coöperation, for which I want to express my thanks to all who took part so willingly and efficiently.

(The meeting adjourned at five-ten o'clock.)

MORNING SESSION, OCTOBER 23, 1923

THE meeting convened at nine o'clock, Dr. Malcolm T. MacEachern presiding.

CHAIRMAN MACEACHERN: Dr. Ochsner is busy in the Board of Regents. Our Vice-Presidents are also busy, and I wanted Father Moulinier to preside, but he has not arrived, so I will have to perform the task myself—or rather have the pleasure of doing so.

I want to tell you how pleased we are that you arrived so early. It is a difficult time to start a meeting. Remember that today we have a very heavy program and an important one. Mr. Gilmore's round table is at two o'clock and we are having that fairly early so that you can go to the Murphy Memorial about three-thirty if you desire to do so. All the hospital people are invited. If you cannot get there at three-thirty, go some time later in the afternoon or during the week and see the headquarters of the American College of Surgeons. It is worth seeing. There is no finer headquarters anywhere. You can see the facilities we have for developing our service to you. We intend to do that extensively. This building has been practically a present to the College and is one of the finest homes in the city.

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FUNDAMENTAL PRINCIPLES UNDERLYING GOOD STAFF ORGANIZATION

I submit six conceptions which seem to me to be basic for good staff organization.

1. The officials of a hospital do not have a divided responsibility for the care of patients. They are responsible for both hospital care and medical treatment.

2. There must be an adequate conception of the meaning of thoroughly conscientious service to the patient and the public.

3. The character of members of the staff must be good.

4. The welfare of the institution and the welfare of the staff are mutually dependent.

5. There must be an efficient plan of organization of the medical service.

6. The staff must be a constantly growing organism.

The hospital authorities do not have a divided responsibility for the care of patients. They are responsible for both the hospital care and the medical treatment. This is the first principle which must be appreciated and applied in the organization of a professional staff. The patient entrusts himself confidently to the hospital. He does not separate in his thinking hospital care

from medical service. Presumably, every hospital wishes to be worthy of the confidence of the patient and the public. Nothing could be more illogical than a neglect, therefore, of any important factor in good hospital service. Efficient professional work is indispensable. Clearly, then, a board of trustees has only partially recognized its obligation to the patient when it does not assume responsibility for medical service as well as for food, drugs, and other things. This principle fixes upon the board of trustees a duty which is often not accepted because it seems to be too exacting. Every hospital worthy of the name, however, must apply it if it shall retain the respect of the patient, the public, and the profession.

The application of this principle does not in any sense operate prejudicially against well trained and worthy medical men. This principle would only save the patient from the hazard which he would accept if he were to choose an incompetent medical advisor. Moreover, the use of this principle prevents the uninformed and unwary patient from exploitation by unworthy medical men. It is true that there are people who will deliberately choose as personal physicians, men who cannot be accepted in any decent hospital and to whom the facilities of the institution could not under any circumstances be extended. The unscrupulous and conscienceless man is sometimes employed as family physician. Every experienced hospital administrator has been implored to admit such a man to the institution for the care of his patients. Also the adherence to this principle undoubtedly exalts the standards of medical practice. There are hospitals which have not been able to exclude the half educated man who is dangerous because of the little knowledge which he possesses and who is either incompetent by law or education, or both, to do certain work which he nevertheless attempts.

An adequate conception of the meaning of thoroughly conscientious service to the patient and to the whole institution constitutes another basic idea of the organization of a staff. The function of the staff is primarily to diagnose disease and to treat the patient in that manner which will most surely alleviate his suffering and restore him to health and prevent a recurrence of his trouble. This is not a perfunctory duty but it is a very pressing obligation which any man who accepts membership in a staff would be expected to recognize.

The staff must elevate the tone of all professional service. It is safe to say that the attitude of the staff toward the patient, the nurses, the public, and indeed the whole organization determines more than any other single factor the status of the institution in the community. Patients should choose a hospital because the professional service is excellent. The staff should inspire the confidence of the public in the institution. There may be material things which are very desirable and which a hospital ought to have, but which it cannot acquire. There really should not be any apology or excuse for an inferior medical service.

It cannot be too strongly emphasized that the staff must be the teachers of the nurses, the internes, and the younger men. It is true that the staff's place in the institution is a difficult one. It appears that members of the staff sometimes fail to comprehend the significant obligation to teach by precept and example those aspiring young women and men. The conduct of internes, their lack of inspiration, and their attitude toward the patient, too often reflect ungraciously upon the staff.

The third principle is that the character of a man who is to be chosen to membership in a staff must be thoroughly good. The two former principles underlie this succeeding one. A staff man is not expected to be perfect. He is expected to exert his individuality as other men do, but he is also expected to give that color to the life of the institution which decent people will appreciate. No one objects to his ambitions nor his effort to realize them, provided they are always guided by an honest desire to render the finest service to the patient and the institution and the public. On the contrary, a staff man without ambition must be lugged along by his more ambitious colleagues.

Boards of trustees seem to fear that organization of a staff will hinder the advancement of certain medical men and stimulate the ambitions of others. No reputable and competent medical man can possibly be harmed by a worthy staff. A staff member who uses his place unfairly diminishes his real usefulness in the institution. His position ought to inspire him to do his best work and to promote the welfare of his profession.

A fourth conception of the organization of a staff is that the welfare of the hospital is the welfare of the staff. The institution and the staff must mutually develop. There are many beautiful examples of the parallel growth of the institution and the staff. Both increase their usefulness as the years pass. Conversely, one cannot grow at the expense of the other.

If a medical man cannot fit into the organization of an institution, and become useful to it, he should not be a member of the medical staff. He must be creative in his own field, but he must also do team work. The best hospitals today are those in which most intelligent attention is given to diagnosis, the study of disease, and the treatment of patients. There are good medical men who have membership in the staff of certain hospitals, but who do not in any sense belong in the institution, because they do not share in its spirit, and its ambitions, and its ultimate triumph. The fitness of the man for the institution is a very important desideratum.

The fifth principle is that the staff shall be organized on those same general principles which any effective and vital organization of men recognizes. In other words, there must be some system of organization. It is not important whether the names of chief or head be used. However, there is much to be said for the departmental plan. The Department of Surgery with its sub-departments should have a head simply because no organization or department of an organization can successfully operate without direction. It is a singular thing that there is so much prejudice in many places as to make an organization of medical men in the hospital almost impossible. The result is that there is clearly a lack of singleness of purpose and definite understanding as to those very important duties which staff men must perform in behalf of the hospital.

A staff must be a constantly growing organism. There is an insidious tendency to hold a staff organization in *status quo*. Unfortunately, a staff sometimes feels that it is complete and may be self-sufficient. This is not a reasonable attitude because the time certainly comes when it is neither strong enough nor adequate. There must be a constant search for the young man who promises to develop the qualities of mind and heart which make him a desirable member of a staff. The greatest care should be taken to encourage young men to aspire to membership in a staff. It is just at this point that many organizations break down. It is a serious duty therefore to admit to the institution reputable and competent medical men who are non-staff men. A hospital is a public institution. It must serve the public in the largest and most beneficial way. It is an obligation of the officials and staff to pass upon the qualifications of non-staff men and to attract to the hospital those who are acceptable. Thus the organization grows and never lacks for well-trained recruits. The hospital therefore makes itself most useful to the community. It escapes the charge that its destinies are controlled by a few men who limit its service for their personal advantage.

CHAIRMAN MACEACHERN: We are fortunate in having a great pioneer in this work with us, Dr. John Wesley Long, whom you all know, of Greensboro, North Carolina, Surgeon-in-Chief, Wesley Long Hospital. Dr. Long will give us his address, *Case Records in Hospitals*, and after that he will illustrate it on the screen. I have the pleasure of introducing Dr. Long.

J. WESLEY LONG, M.D.: *Necessity of Records:* I am asked to discuss with you the organization of an efficient case record department in a hospital. The title of my subject presupposes that hospitals should have such a department. As a matter of fact, in this day of enlightenment it is generally recognized by both profession and laity that records are the *sine qua non* of a modern hospital. Their importance admits of no debate. Their necessity is absolute. Without records the work of a hospital is like a rope of sand; it breaks of its own weight, having no cohesive force, no tensile strength, no continuity.

Record Heritage of Posterity: When a man who works in a hospital that does not keep records has been gathered to his fathers, his life work, however excellent it may have been, becomes only a memory. The rich inheritance of his experience which he and his hospital should have left to the profession takes wings and flies away. For a physician to spend much of his time in the indulgence of indolent pleasures, rather than to bestir himself to the labor of recording his experience and the invaluable lessons of wisdom to be drawn therefrom, is to trade the birthright that belongs to posterity for a mess of pottage.

Value to Historian: Case records are not only of inestimable value for immediate use but they are the final court of appeal for the historian. Had Crawford W. Long of Jefferson, Georgia, put on public record at the time of its performance his first case of ether anæsthesia in 1842, yea, the first that ever took place in the history of the world, there would never have been any controversy regarding the claims of the disgruntled and heart-broken dentist to whom Congress awarded the credit for the discovery that ether was an anæsthetic.

Man Known by Records: Hanging in a conspicuous place in a certain hospital in a southern city, there is a legend which reads, "A man shall be known by his records." He who wrote that sign put his finger upon a vital spot of hospital efficiency.

Cost of Records: Many hospitals hesitate to establish a case record department because of the extra cost. The Superintendent of a 100-bed hospital recently said to me deploringly, "Why we appropriated two thousand dollars for our record department last year." My reply was, "My dear doctor, you are getting off cheap. I spend more than that every year in the case record department of a smaller institution than yours." The hospital that does not maintain a case record department on the score of economy is possibly penny wise, but most assuredly it is pound foolish. I know of no department of a hospital that yields a richer income in reputation, in satisfaction, in the development of scientific work, and in the increase of patronage than that of an up-to-date case record department.

Historian Vexatious Problem: The greatest difficulty involved in this question is in getting someone to write the records; and the smaller the hospital the bigger is the problem. This is a far more valid excuse than the cost of the department. O, it is easy enough to employ a stenographer who will write down what is dictated to her, but the real historian must go far beyond this and follow the case all the way through from alpha to omega. The scarcity of historians necessitates the Professional Staff doing a large part of the history work.

Colleges Should Teach Record Writing: I believe it would help to solve this vexatious question if our medical schools would teach their students the art of writing case records; indeed, some of the colleges are already doing this. Hospitals, themselves, might very profitably give lectures and demonstrations to their internes and clerical help.

Hospitals Should Possess Information: A hospital is supposed to be in a sense like the doctor himself, or a lawyer who is possessed of much knowledge, to whom those who have the right may go for information. But if a hospital does not have a case record department, to whom would one go for the desired information?

Clock Without Hands: Last winter I was on a lecture itinerary with a party in the interest of the American College of Surgeons. One of the cities in which we held a meeting was Topeka, Kansas. The National Cash Register Company has a business house there and in their show window they display a sign which reads "A house without records is like a clock without hands, still running but giving out no information." In this respect some of our hospitals may also be aptly compared to "our mansions in the skies" which we are told "were made without hands."

First Point of Emphasis—Organization: There are two points of emphasis in my subject. The first one is *organization.* Those who arranged this program chose wisely when they specified the "organization" of a case record department. Without organization nothing worth while is ever accomplished; in professional life, social activities, war, politics, welfare work, individual enterprises—all depend, without exception, upon organization for their success. True, every great enterprise is born in the brain of some idealist; but, unless he can reduce his ideas to some practical form that will invite the confidence and coöperation of his fellowman his dreams will never materialize and he will be put down as a crank. Therefore, any plan to produce beneficent results must be organized, so that everyone concerned may pull together for the common good. Organization may be called the machinery that produces the goods.

Hospitals Did Not Keep Records: Organization is especially necessary in establishing a case record department for several reasons; one of them being that to most of us the keeping of records, certainly in anything like a systematic manner, was a new departure. We built and ran hospitals in the old slipshod way for such a long while, without ever having sensed the necessity of keeping records, that we have come to regard history taking as a work of supererogation. True, many hospitals did keep records, but generally speaking this was not done. I once worked in a hospital that made it a practice to burn all records as soon as the patient was dismissed or died.

Weighed in the Balance: Therefore, when the word was passed down the line that hospitals must keep records, or they would be weighed in the balance and found wanting, it was regarded as an innovation; and most truly it was. This thing of having to write down everything one does produced about as much mental perturbation in certain quarters as did the handwriting upon the wall in old Belshazzar's court. Some hospitals have not yet fully recovered their equilibrium. However, the most unorthodox are beginning to sit up and take notice.

Difficult to Change Customs: You know it is not an easy matter to change established customs of any kind anywhere. But in the scientific world the watchword is "progress"; we must go forward! "Where the vanguard marches today the rear guard shall rest tomorrow."

Convert Staff: Now to efficiently organize a case record department it is necessary in many instances to convert the entire staff. They must be shown that it is to their interest to conform

to the standard set for hospitals. We must sell them the proposition. Hospitals, like all human institutions, have a personal equation, and should be approached in the spirit of helpfulness and not in a dictatorial manner. This requires both diplomacy and perseverance.

Now by the staff I mean not only professional men but the management as well, whether it be the physicians themselves, a Board of Trustees, some religious order, the city council, or whatever body is vested with the control of the institution. Also it includes every attaché of the hospital—physicians, internes, secretaries, technicians, nurses, domestics, and even the undertaker since he can be of so much help in the matter of autopsies. I would go still further and say that we must get our patients committed to the value of case records. You know that sometimes an obstreperous patient resents giving any information whatever about himself. In automobile casualties, especially if they be the result of a "moonshine ride," people often refuse to give even their names.

The Strength of the Wolf: In other words everyone connected with the hospital must be in thorough accord with the new order of things. One balky horse in a team will stop the wagon. It is the pull-together spirit that gives the maximum degree of efficiency to an organization and to every one associated with it. Kipling puts it forcefully in "The Law of the Jungle" when he says:

"For the strength of the Pack is the Wolf,
And the strength of the Wolf is the Pack."

House Divided Cannot Stand: I stood a few years ago upon the ruins of a home that had been demolished and the family scattered far and near, some of them to the cemetery. The only living son of that family stood by my side. As we gazed upon the physical wreckage about us he said as if talking to himself: "A house divided against itself cannot stand." And then I recalled, for I had known the family in my youth, that the father and mother of that home had not spoken to each other for thirty years. The truism uttered by that scion of a once prosperous but now destroyed home is as axiomatic of the professional life of the hospital of today as it was of the family life when it was written two thousand years ago.

Staff Meetings: Just here comes in the great value of regular staff meetings, where the weak places of an institution as well as the strong points are brought out in bold relief and the proper remedies applied.

Department—Second Point of Emphasis: The second point of emphasis is on the word *department.* Department signifies a major division, and as such is equal in importance with any other part of the institution. Surely the modern conception of a hospital attaches as much significance to the case record department as it does to the culinary department, or the financial department, or indeed the operating department; each constituting an essential part of the whole.

Mistake of Former Times: The mistake that we made in former times was to leave the recording of cases to the pleasure and convenience of the surgeon. Usually he never found it convenient and certainly it was never any pleasure to him to perform such an onerous task. Even the diagnosis he often left *sub judice* rather than go to the trouble to write down his opinion. Under the old régime we looked to the individual and not to the organization. Happily, in the language of a popular cartoon, "Them days is gone forever."

By-Products: Last year I attended a famous Pure Food Exhibit in this city. One of the big packers had a booth in which they showed the slaughtered steer and sixty-seven of its by-products. While many by-products either good or bad emanate from the work of a hospital, the case record department is not one of them. If it does not represent the hind quarters of the steer, it certainly stands for the back bone, the spare ribs, the heart, the lungs, and the liver of the noble animal. Therefore, in the organization of a case record department I would insist that it rank equal with that of any other division of the institution.

Sound, Simple, Sensible, Scientific: In order that a case record department shall function in the most efficient manner, it must be organized along lines that are sound, simple, sensible, and scientific.

1. The scheme should contemplate that the records be truthful, without evasion, omission or prevarication; thus they will be *sound.*

2. The system must not be complicated, but so *simple* that the way-faring man can read as he runs. The various reports from the laboratories, medical men, anæsthetizer, surgeon, indeed everyone connected with the case, should so harmonize and dovetail into each other that the whole is easily comprehended. This is not possible unless the system adopted be understandable and workable.

3. The formulated plans should be the embodiment of *common sense;* not full of fadisms, frills, air pockets, cross currents or enigmas. In other words they should be arranged along

practical lines, so that anyone familiar with case records might trace out the history of the patient from the entrance card through the physical and laboratory findings, operating room, postoperative care, to the ultimate outcome, whether the patient be sent home or autopsied.

4. Furthermore, the system should contain the essential elements of an up-to-date medical synopsis so that the records may be adjusted *scientifically.*

Principles Not Details: Thus far we have discussed only the principles of the case record department and not the details. There are certain details that must be worked out according to the peculiar work and environment of each individual hospital. The exact method one institution employs might not be the best for another, but the essential elements should be the same in every instance.

Loose Leaf System: Most of the hospitals with which I am familiar use some form of loose leaf or card system. When the case is completed the various leaves, blanks or cards are assembled and filed in an envelope or bound in book form. While certain hospitals prefer envelopes, we bind our histories at the Wesley Long Hospital in volumes as a matter of both convenience and economy.

Indices: Whatever system of records is adopted there should by all means be an adequate index. The index is the milk in the cocoanut of a case record department. The system of indices that we employ is very simple and satisfactory. We use cards 5 x 3 inches. The first index in importance is arranged alphabetically, giving the patient's name, address, volume, and page. The next index divides all cases into well-recognized groups: hernias, cancers of the breast, hysterectomies, etc. This index also gives the names, volume and page. In addition each volume carries its own index.

Histories Found Quickly: In the Wesley Long Hospital I can send a nurse to the library of the case record department and within a minute or so she will find the history of any patient that we have operated upon in the last eighteen years. This would be impossible but for the practical indices which we employ. I cannot stress the value of indices too strongly.

Library for Case Records: Another point often overlooked is the filing and location of case records. So often they are stowed away in a dark closet or piled up in the basement or some other inaccessible place. The result is obviously very unsatisfactory. Case records should be located like the Texan carries his gun, where he can reach it easily and quickly. Our case records are kept in my consultation office, which by the way is in the hospital.

Accessibility Saves Embarrassment: Accessibility often saves one from embarrassment. Recently a man and his wife from another town consulted me. I asked them what I could do for them. The lady said, "We came to see you about this pain in my side." I asked how long she had had the pain. She replied, "Ever since you operated on me five years ago." Whereupon I consulted my alphabetical index, found the volume containing her history and turned to the page. I read to them her records which stated, "I have a pain in the right side of my abdomen and *have had for twelve years.*" "Do you remember telling me that?" I asked. "No," she said, "I only remember having the pain from the time you operated on me." In other words, she was making me responsible for a pain that she had had for twelve years before I ever saw her. My record of her case refreshed her memory wonderfully.

Records Are Like Good Roads: Hospitals that have an efficient case record department soon come to regard them as the public does good roads; after trying them once, they are never willing to give them up. To get the most out of case records we must go after the proposition in such a manner as to "bring home the bacon," as we say down South.

Zeal of the Widow's Son: Zeal like that of the widow's son is commendable in this work. Let me tell you the story. A preacher was holding a meeting in the country. A good-looking widow asked him to go home with her for supper. Of course Barkis was willin'. The widow left church early to prepare supper. After the services were over the preacher took the nigh cut across the fields. As he climbed over the fence he saw a boy down in the corner digging for dear life. The preacher said, "What are you after, Sonny?" The boy replied, "I am after a ground hog." "Do you think you will get him?" "Git him! I got to git him—the preacher is coming to our house for supper and we ain't got no meat."

Spiritual Side: In conclusion I want to add that so far we have been discussing this important question from a material standpoint, in fact we might say from a purely selfish aspect. That is all right, but you will agree with me that the spiritual side of one's work scores the highest point of efficiency. We have been looking at hospital standardization in the light of our own convenience, the emoluments to be derived therefrom, the fortifying of our prestige, and the development of cold science. But what about the patient? Do our plans contemplate nothing be-

yond getting him into the hospital and curing him of his physical ills? Shall we not follow him always with that interest that stamps us as our brother's keeper?

Keloid Case: Let me give you a concrete example of what I regard as the true spirit of efficiency in hospital records. Thirteen years ago a big buck negro who was a laborer in a cotton mill came to me with a large typical ulcerating keloid on the back of his neck. I removed the growth and submitted the specimen to the pathologist who reported it as benign. About two years afterward I employed a laboratory technician from Johns Hopkins Hospital. I told him to go over all our specimens and if his findings agreed with the records, all right; if not, he was to notify me. When he came to the keloid specimen just mentioned he reported it to be malignant. I said this is impossible because the man was well and at work only recently. Well, you know the Hopkins people are pretty cock-sure about what they think; so to settle the matter I sent our interne and my son to get a report on the negro's present condition. They came back in an hour or two and reported that the man had quit work, was at home sick in bed, and was actually bleeding to death from the growth on his neck which had recurred. I sent them back immediately with instructions to bring the man into the hospital at once, to not stop to ask his permission but to bring him whether or no. The old negro protested, but they lifted him into the car and brought him. His condition was indeed deplorable. The growth was larger than the original one, the cervical glands were involved, the hæmorrhage profuse, and his case certainly looked hopeless. But I was determined to save that old fellow if I could. I made a very wide dissection going above his occiput, far down on his back, and nearly to the front of his neck on either side. That was some wound when the dissection was finished. The edges could not possibly be brought together, but by sliding flaps up from his back and shoulders and pulling the scalp backward so tight that he could hardly bat his eyes, the area of the incision was lessoned considerably. That was ten years ago.

Northern Friends: Recently some friends from up North were visiting me. They had never been South before. Among other points of interest I showed them our cotton mills. And let me tell you we have mills in Greensboro worth talking about; why one concern makes cloth enough every year to go around the world three times, 75,000 miles of cloth. While showing my friends through this mill we came upon the old negro, Frank, of keloid-cancer fame, sound as a buck and hard at work. O, I hear someone say, he was only a negro. True enough, but I declare to you in this presence that the South regards her negroes very highly and we are ever ready to serve them in every way possible. Did you know that one person in every ten in the United States is a negro? This man had been granted an indefinite respite of life, he had supported himself and family, and had contributed ten years of service to one of the biggest and most essential industries in the world, namely, that of clothing the naked.

Happened Because of Case Records: This could never have happened but for the fact that we keep efficient case records and that our interest in the patient follows him long after his dismissal from the hospital.

Questions for Each One: The question that every physician and every attaché of every hospital should ask themselves every day, is: "What is the best thing that I can do for my patients?" And whether or not we receive immediate compensation for our services, we have the assurance from lips Divine, that "Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

CHAIRMAN MACEACHERN: I am sure I voice the feeling of the meeting today when I say we are deeply indebted to Dr. Long for his wonderful talk. He gives a good address on every subject he handles, and especially on this subject.

We would like, indeed, to hear at more length from our speakers, but after the program was about completed we were able to secure the Staff Conference Demonstration, and we thought you wouldn't mind shortening up some of the talks to have that come in. We will keep the discussion until the end.

Dr. Carl Black of Jacksonville, Illinois, Surgeon, Passavant Memorial and Our Saviour's Hospitals, is next. Is Dr. Black in the room? (No response.)

We will then pass on to the next subject, *Difficulties Encountered in Case Records and How to Overcome Them,* by Miss Zula Morris, Grand Rapids, Record Librarian, Butterworth Hospital.

MISS ZULA MORRIS: The honor of addressing this asemblage is a great one and I appreciate the privilege of being allowed to present the record librarian's point of view in regard to the record situation. My earnest hope is that the presentation may not appear presumptuous. The achievement of this organization in the last five years has been phenomenal. For in that comparatively brief time you have brought about a widely prevalent understanding of the

value of good case records. You have been constantly meeting and gradually solving the problems connected with this movement. Therefore to tell you the difficulties encountered in the establishment and operation of a record department may be carrying coals to Newcastle. My justification for recapitulating these problems lies in the fact that the layman's angle of approach is different from yours and that a comparison of the two angles may not be wholly without value to you.

I wish to discuss eight difficulties in the way of establishing and maintaining a record department. The first of these is the apathetic regard in which records are usually held by boards of trustees. Thanks to the American College of Surgeons, superintendents and medical staffs usually present a united front in the demand for a record department. No enterprising superintendent, alive to public sentiment in regard to rating, wishes to be at the head of an unrecognized hospital. It is equally true that no progressive physician can afford to give his time and efforts to an institution that does not yield him the advantages offered by a hospital of well-known standing. Boards of trustees, however, must consider the financial question. It is by no means a negligible one. The cost of a record department in an ordinary 100-bed hospital may easily run to $4,000 a year. But the ideals of trusteeship are even more compelling motives than economy. So boards are as a rule converted to the cause of records if the superintendent stresses two facts—first, that the keeping of records tends to raise the standard of medical practice in a community; second, that the public for which the trustees are responsible benefits by such growth in medical skill. The expense of the record department would be still further justified if the staff could show that the data accumulating in the files were being used for promotion of public health and sanitation. Always the first of these appeals may be made to the board to overcome indifference and occasionally the second one may be honestly used.

The second difficulty is the securing of a capable head for the record department—a difficulty because the supply of trained record librarians is far below the demand. The next step in the progress toward better records should be an attempt to draw into the profession persons of broad educational qualifications. The record librarian should be more than an automaton noting whether all the lines of the history sheet are filled out and mechanically recording figures and diagnoses. She should do real thinking about the histories she analyzes. The difficulty of finding enough such persons to manage the record departments of 5,000 hospitals throughout the United States alone is appalling. And it will have to be met by organized effort. The record librarians themselves could initiate the remedy. They could organize for the purpose of standardizing the requirements and the training for the position. But they should have the support of older and better established associations. The body I am now addressing and the American Medical Association could exert a strong influence in this direction. They could recommend that educational institutions offer courses in record keeping to students who have had two or more years of collegiate training. These courses preferably should be given in universities that conduct schools of medicine and teaching hospitals, so that candidates for the course could have practice work. Also any hospital having a well-organized department of records could offer training to persons of requisite qualifications. In these ways a standard curriculum for the training of record librarians could be built up with two desirable results—namely, the quality of the workers would be raised and their number increased.

The third difficulty is that of obtaining the thoroughgoing support of the medical staff. The best solution for all problems connected with lack of staff coöperation is the appointment of a strong Committee on Records. From actual experience in three hospitals, in each of which a wide-awake committee of this sort was actively functioning, I know that nothing else can give the record librarian such a sense of intellectual refuge and moral support as a committee who are peculiarly responsible for her and her department. There will be many points on which she will have to consult them. Whether provisional and final diagnoses agree when one of them departs from the accepted nomenclature and her knowledge of medical terminology is insufficient to determine the relation between them; whether history and physical findings justify the diagnosis in some doubtful case; whether laboratory work is indicated and not requested—these are a few instances, enumerated at random, in which the record librarian is in sad case indeed if she has not a medical committee to guide her.

Then the committee is the medium of communication with the staff. There are some ideas that in one form or another should be made to register at every staff meeting. They are: first, the record is the one sure method by which the physician can give evidence that his work has been hon-

orably conscientious and painstakingly scientific; second, staff discussion of such evidence is the easiest and most dignified means of securing recognition from one's fellow physicians; third, the attention of the Record Committee is being called to every good record and the cumulative impression of a series of such records will have weight when staff honors and promotions are being considered. If through the Committee on Records these facts can be put across to the staff, one of the darkest clouds upon the horizon of the record librarians will have been partially lifted. This cloud is the indifference of some physicians to the quality of their records. Indifference in any work is usually overcome by the realization that it is being observed with kindly and discriminating interest. The record librarian is the only audience every staff man has for every record he writes and she must be an appreciative audience if she fulfills her highest mission. This appreciation can best be expressed through the Committee on Records, who at staff meetings can present good records as models.

The fourth difficulty is one which at some time and in some way every record librarian runs square up against. Often she has to struggle along with a poor one which even her lay mind recognizes as unscientific and to which she would gladly make the additions always being demanded were it not for the difficulties, increasing in geometric ratio, which such a letting down of the bars involves. Her plight is not so serious, however, as that of the record librarian whose staff are compiling their own catalog of diseases. Note I say *are compiling*, not *have compiled*. The objection lies in the fact that the index is in a constant state of flux and that cross references, so valuable in research work, are being continually invalidated. There is only one way the difficulty connected with nomenclature can be overcome and that is to adopt some standard classification and then adhere to it with absolute rigidity. Positively no latitude should be allowed in the matter of conformity to the terminology adopted. Here again the Record Committee can handle the situation better than anybody else whenever grave opposition is encountered. They can say to the staff, "A majority vote may discard this classification and choose another. But so long as this is the adopted nomenclature, there shall be no additions to it."

The fifth difficulty is that of assembling significant statistics when the charts are not completed from day to day. If an appreciable percentage of records remains constantly unclassified, even mortality figures are not accurate and such work as tabulating end results in any certain type of case is a hopeless impossibility. Probably the best way of handling this difficulty is to point out the worthlessness of all analyses of hospital service not based on 100 per cent complete records. If the board of health, for instance, wishes a report on the stillbirths for the month and 150 incomplete records must be searched through before accurate statistics can be given, a lamentable waste of time is involved. If the chief of surgery wishes to know the percentage of surgical deaths for the month, he can get no definite idea so long as the 150 records are unclassified. A few examples of this kind will in most cases impress the staff with the necessity for promptness in finishing histories.

The sixth difficulty is the quality of records, particularly surgical ones. For, from the point of view of consistency and conclusiveness, medical records are on the whole far better. One of the most common faults in records is lack of coherency between the interne's contribution and that of the attending man. Another fault frequently noted is tenuity of relation between the various parts of the record. All the parts of a good surgical record point more or less clearly to the preoperative diagnosis. But if the most careful calculation should fail and the provisional diagnosis prove incorrect, the surgeon owes himself an exact and detailed description of the gross findings. For it is in these findings that any medical expert who may examine the record will find excuse for the surgeon's failure in preoperative diagnosis. The infrequency of such explicit operative records is distressing. The quickest remedy for such inadequacies of records is an appeal to the staff by superintendent or Record Committee. An attempt should be made to inspire every member of the staff with a willingness to assume his full responsibility in training and supervising internes. And in every individual physician a feeling for logical definiteness of records should be implanted.

The seventh difficulty has already been hinted at. It is the failure of the staff to make vital use of the files of their record department. The material contained therein, if tabulated and presented to the public, might have enormous value to the citizens of the community. If the data on typhoid cases, for instance, were arranged for easy understanding, if distribution curves showing age, sex, occupation, sections of the city, were prepared by the staff and submitted to the public press, who can measure the beneficial effects that might follow? Perhaps such a use of medical files is too much to hope for

at the present time. But it would surely be practicable for the staff to collect from their files that which would liven up county medical societies and keep them informed as to the scientific phases of hospital work. And the staff ought to find their own record department valuable as the basis of articles on scientific subjects which they may be called upon to prepare. As to means to be employed in encouraging such use of case records I have no definite suggestions to offer. Could the annual report of hospitals include an account of staff activities and more especially a list of scientific articles published—or delivered—by members of the staff? Could the American College of Surgeons each year give an extra good mark—a sort of A plus, as it were—to hospitals whose staff had made some contribution based on its own records to medical research? These may not be feasible methods of promoting the proper use of case records, but at least they will serve to start discussion.

The eighth difficulty is one of the greatest that hospitals face. It is the succession of problems that arise when lay people must prod professional consciences. Nine years ago you hit upon the scheme of improving your work by making the hospitals assume responsibility for it. Up to a certain point this is of course perfectly legitimate. Part of the responsibility belongs to the hospitals and in most cases they have quite willingly assumed it. But are you sure that you are carrying your part of the burden? In conducting your campaign for better records as tangible evidence of high standards of professional work, are you using all the means at hand? Are you presenting throughout the country at every meeting of medical societies—county, state, and national—the need for more adequate case histories? Are you attempting to enlist the aid and sympathy of thousands of physicians of the United States outside your organization? Are your inspectors asking hospital superintendents for reports on the records of F.A.C.S.'s who are members of their staffs? Are you making efforts to have your organization represented by at least one member on the Record Committee of every hospital in the country? If you are not doing the last two things, you cannot be sure that the members of your own body are living up to minimum requirements on case records as laid down by yourselves. You are shifting to lay shoulders the burden of holding you up to standards of your own making. You are leaving to hospital superintendents and record librarians the duty of securing compliance with these standards. My plea to you is not to lessen demands upon hospitals desiring rating but to increase demands upon the medical profession—even that body of it outside your own society. Perhaps these outsiders could be reached in every community by local chapters of F.A.C.S.'s. If the members of your body in every city would organize for this specific purpose, surely they could find means of interesting the remainder of the medical men in this problem of records. Will you not help us by bringing pressure to bear upon medical societies at large?

To summarize, the chief difficulties now standing in the way of good records are:

First, ignorance of boards of trustees as to the value of records and consequent lack of proper financial support for the record department. This can be met by an educational campaign on the part of the superintendent and the staff who should lose no opportunity to convince the board.

Second, a dearth of adequately trained record librarians. This can be lessened by standardization of the qualifications and requirements for the position.

Third, lack of coöperation on the part of the staff. This can be largely solved by creation of a Committee on Records.

Fourth, non-conformity to nomenclature. Here the remedy is a paraphrase of Chief Justice Chase's terse statement—the way to conformity is to conform.

Fifth, worthlessness of most statistics. Meaning can be put into these only by completion of records from day to day.

Sixth, quality of records. Emphasis on this at staff meetings is the only means of producing results.

Seventh, slight use made of case records.

Eighth, tendency to consider that all responsibility for records rests on the hospital. Pressure upon hospitals has just about reached the point of maximum intensity. Further advance will have to be made through interest in the cause on the part of the medical profession at large.

Fellows of the American College of Surgeons and Hospital Superintendents, into your hands I commend my suggestions. I thank you.

CHAIRMAN MACEACHERN: I must congratulate Miss Morris on the masterly way in which she has handled this difficult subject. She has enlightened all of us very much through the clear, logical data she has presented this morning. I know by your applause that you not only highly appreciate it but I am sure that you have profited greatly by it.

Dr. Ochsner, the hospital group would like to have a word from the new president before he leaves.

He is today our new president, and I want to tell you he is whole-heartedly behind the hospital movement, and I am sure we would all like to have a word from him. He has to leave in a few minutes for the Regents' Meeting.

PRESIDENT OCHSNER: Ladies and Gentlemen: I have listened to these splendid papers with much interest. I believe that, as has been said this morning, one of the most important advances in hospital development in this country has come from the insistence of the American College of Surgeons upon the keeping of proper records. You have heard the reasons over and over again.

I have to leave in a few moments because the Regents are going to have a session, and I have to be present there, otherwise I would remain the whole morning. Let me just tell a little experience. Some years ago when our great county hospital here started to do things in the civil service way, and barred politicians and everything bad in that line, a committee was appointed to look over the records once a month in order to standardize or rather to give the standing to members of the staff.

I worked on that committee for a number of years and this experience occurred to me. One of the Fellows of the College came to me at a meeting and said, "How does it come that I am marked so low? You know that my work is good, and still your committee has always put me down near the bottom, so far as records are concerned."

I asked him if he read his records. "No," he said, "I do not read them."

"Do you have your interne read them to you?"

"No, I haven't made a practice of it."

That was where the difficulty came in. I have heard that the lack of use of records is one of the bad things. Now, I believe that wherever the interne or whoever writes the record has to read the record to his chief, it will be but a very short time before he will produce very good records. It is because the chief does not take definite interest, concise interest in the record and does not insist upon all the details. In my own hospital at a certain hour every week, the hospital staff, that is the interne staff, come together and we go over every record of that hospital for every patient that has been dismissed during that week, so that every interne knows that his records are going to be gone over before they are put in the files.

We were put on to this method by the committee of the American College of Surgeons. We had kept records for thirty-five years but we had not definitely gone over every record, and a good-for-nothing interne could slip his records through because he could take for granted that he would not be caught very often. Now he finds he is caught every time, and he simply can't afford to do it. It is a very practicable way. I must not stay any longer. I thank you for this opportunity.

CHAIRMAN MACEACHERN: I wonder if you are familiar with the Butterworth Hospital. Mr. S. G. Davidson, the superintendent, will be with us today and will speak this afternoon. A splendid set of staff rules and regulations has been drafted in this hospital and I am sure that if you will write asking for a copy, Mr. Davidson will be glad to send you one. I hope Miss Morris will be with us longer this week, and, if she is willing, we would like to have her at the Standardization Bureau to talk to any of you. She has not only studied records in her own hospital, but she has just finished a tour of investigation, and I know that you all considered her talk this morning a real treat. It was a real education to me also on records, along lines I failed to correlate and systematize as she did. Is Dr. Black here now?

Dr. Black will take the subject *Securing, Supervising and Filing of Records.*

CARL E. BLACK, M.D.: Mr. President and Fellows of the American College of Surgeons, Ladies and Gentlemen: I deeply appreciate the opportunity to explain at this meeting how a small hospital (Passavant Memorial Hospital, Jacksonville, Illinois) has managed to get its start in keeping staff records. We have only made a beginning, however, and cannot be regarded as having solved the questions involved.

I will not consume time with any description of the forms of record blanks used. They are, mainly, the ones recommended by the College of Surgeons and the American Hospital Association. I take it for granted that we have all accepted these blanks as a basis of all hospital records, subject of course to such modifications and amplifications as the needs of the individual hospital or the conditions of application may demand.

It is my purpose to call your attention briefly to some points in the experience of our hospital (less than 100 beds) in securing the active cooperation of the staff in record keeping. The majority of the members of our staff are busy general practitioners who had had little experience in record keeping until we adopted standardization and organized by appointing a Record Committee. We would not have you think that

No. 11752 **PASSAVANT MEMORIAL HOSPITAL, Jacksonville, Ill.** Full Pay

Admitted Nov. 4 1923 Name Jane Foster
Room No. 158 Rate per Week $30.00 Address 834 Lurton St.
To be Paid by Husband – Howard Foster (Merchant)
Relative or Friend Same.
Address Same. Phone Res. 1019. Bus. 1591
Age 34 Sex F Civil Condition Married Color White
Birthplace America Religion Ba
Occupation Housewife Employer ——
Attending Jas. R. Brown M. D., Referred by J. C. Smith (Argos) M. D.
Admission Diagnosis Acute Appendicitis.
Operation Appendrectomy and Ovariotomy (Rt.)
Final Diagnosis Acute Appendicitis and Cystic Ovary (Rt.)
Results of Treatment Cured ~~Improved~~ ~~Unimproved~~ ~~Died~~
Date of Discharge Nov. 28 1923 Days of Treatment 15

1 Library Bureau-71 66300

Figure 1.
"Key Card" to
Patient's Record

No. 11752 **Passavant Memorial Hospital, Jacksonville, Ill.** Operation Data. 777

Name Jane Foster Room 158 Date Nov. 4 '23 Op. Room Used
Operation Appendrectomy & Ovariotomy Operator Dr. A. E. Brown
Anaesthetic Began 11:05 A. M. Ended 11:40 A. M. Time 35"
Anaesthetics Used and Amts. N.O. & Oxy. Chloroform —— Ether ——
Operation Began 11:15 A. M. Ended 11:40 A. M. Time 25"
Pulse Before 98 After 88 Preop. Con. Heart O.K.
Lungs Negative Kidneys Neg. except trace Alb. M.
Satures Catgut #2. S.W.G. retention.
Drainage None Instrument and Sponge Count by A. Hart.
Stimulants None Attested by Surg. N. Grant
Anaesthetist Dr. E. Frost Anaesthetist's Asst. B. Price
Op. Assistants Dr. C. Begg. Others present at Operation
—— Brother & Dr. Smith.

Figure 2.
Operating Room Card

No. 13695 **PASSAVANT MEMORIAL HOSPITAL** Obst. Room Record

Name Jane Smith Room 55 Date Nov. 5 1922 Age 34
Admitted to Labor Room 10:15 A. M. T. 98 P. 84 R. 22 Gravida
Removed from Labor Room 1: A M. T. — P. — R. —
Examined by Dr. A. R. Brown at 10:20 A M. Kind Abd.

Position R.O.A. Presentation Cap. Foetal Heart 140
Urine No Abnormality Defection An hour ago – satisfactory
Birth at 10:40 A.M. 11/5 1922 Sex M. Weight 8 lbs. 11 oz.
Placenta expressed at 10:45 A.M. Temp. 100° Urine Yes
Forceps applied at —— M. ~~Chloroform~~ continuously, from 10:30 A M.
Forceps removed at —— M. " " intermittently, to 10:40 A M.
Hemorrhage about 6 oz. Nurses present Jones, Crane & Bliss
Perineum Intact
Sutures None No. — Remarks Conditions good.
Medication Fl. Ext. Ergot 3i. Nit. Silv. Sol. to eyes

Figure 3.
Obstetric Room Card

No. 12842 **Passavant Memorial Hospital Jacksonville, Ill.** X-Ray

Admitted July 5th 1923 Name Charles Hooper.
Room No. 75 Rate per week $ 25.00 Address Woodhouse Ill.
To be paid by C & A. R. R.
Relative or friend Wife - Anna Hooper.
Address Woodhouse Ill.
Age 50 Sex M. Civil Condition Married Color W.
Birthplace U. S. A. Religion Methodist.
Occupation Brakeman Employer C & A. R. R.
Attending C. E. Black M. D. Referred by A. R. Smith. M. D.
Admission Diagnosis Fracture left leg.
Skiagraph of Left leg and knee. Fee $ 15.00
Final Diagnosis Frac. Patella & Femur - lower 1/3 Plate No. 4
Treatment By attending. Fee $ —
Date of Discharge Aug. 30th 1923 Days of Treatment 57
Signed H. A. Chapin M.D. — Radiographer

Figure 4
X Ray Room Card

SUMMARY

Index No. 616.345.2.087 Date Oct. 4. 1911 Age 12 Sex F.
Diagnosis Appendicitis - Suppurative.
Name Nellie Jones
Referred by Dr. Daniel Wild - Jonesville Ill.
Pathology Gangrenous Appendix - two abscess cavities.
Operation Appendectomy - drainage up behind liver and down into pelvis.
Complications Nov. 11. Septic temp. with pus cavity in loin requiring lumbar drainage
Result Complete recovery in four months.

Figure 5.
Summary Card Used by the Author

Index No. 616.345.2.63.087 **SUMMARY CARD** **Passavant Hospital**

Hospital No. 5876 Date—Admis. Oct. 4 '11 Date Disch. Nov. 24 '11.
Diagnosis Appendicitis - Suppurative.
Civil Condition S. Occupation Student Age 12 Sex F.
Attended by Dr. Carl E. Black.
Pathology Gangrenous Appendix - two abscess cavities.
Operation Appendectomy - drainage.
Complications Nov. 11. Septic temp. with pus cavity in loin requiring lumbar drainage.
Condition of Discharge Cured.

Figure 6.
Summary Card Proposed for the Hospital Records

we have achieved any final success. We give you our method to date for the purpose of eliciting criticism and discussion which will enable us to improve the plan.

We are fortunate, however, in having no active opposition to improving our records. We had no "conscientious objectors." One advantage which our hospital has, is that we have had some sort of records since the first patient was admitted, nearly fifty years ago. True enough these earlier records were exceedingly meager, but they were considerably better than nothing, as they contained a few items of essential data, including usually the cause of the illness and the result of treatment. From time to time other items were added.

Years ago our trustees adopted the theory that all matters pertaining to the care of the sick were questions which belonged exclusively to the staff. The keeping and filing of histories and records has been under the direction of the staff. This arrangement gives our staff full liberty and responsibility in developing this department.

Our first step was to secure adoption, by the staff and then upon their recommendation, by the board of trustees, of the principles of a standardized hospital as enunciated by the American College of Surgeons. This was done without emphasizing too many details, but confining ourselves to general principles.

In all that has taken place in these matters the initiative rested with the staff, which we think is a fundamental principle which will greatly aid in securing coöperation. We regard this as essentially a doctor's question and have noted that in hospitals where the board of trustees or other managing bodies have undertaken to tell the staff what they should do and how they should do it, friction has been created.

If a staff can be led to make recommendations to the managing body, and then have that body adopt them, it will make for harmony as well as for efficiency.

The first report of the record committee of our staff was a recommendation that the hospital employ a historian to have charge of the records, to check them each day and to report failures and delinquencies in the records to the staff. This recommendation was adopted by the staff without serious objection and was a most important step in securing coöperation. The staff also requested the hospital to set aside a room for the historian's use where all files could be kept and all work on the records done.

The Board of Trustees promptly granted these requests. Thus the essential machinery was set up and we were in a position to find out just what our staff members would do.

Since opening of the hospital almost a half century ago, the data included in the form of a card record as shown in figure one, has been kept. We also were fortunate in having had each admission to the hospital numbered chronologically from the beginning and these numbers still continue. The number on the card shows how many admissions have been made to that date. Some years before the adoption of standardization our staff adopted the plan of never having the patient's name appear on the record sheets but in its place the chronological number. This number is identified by the card which we know as the "Key Card" in the index file kept in the office of the hospital where it is only accessible to the proper officers.

Keeping the name of the patient off the record sheet, we consider a most important step in securing free and liberal recording of the history and other data in the record; it takes away from the "conscientious objector" his most important argument, i. e., that his relations to the patient are private and personal and cannot under any circumstances be divulged.

As soon as we secured our historian, all of the past records of the hospital were accumulated into the record room in proper files where they are filed in chronological order from the first patient admitted, to date. The early records are meager, but the files show a progressive tendency to get more and more information into the record.

In addition to the admission card (our "Key Card"), the hospital had kept for some years the operating room card, also an obstetric room card, and an X-ray room card. The cards are filed in alphabetical order under the name of the patient. These indices are kept in the record room. Thus you see that prior to the adoption of standardization we had taken some steps in the direction of better records, although they were incomplete and unsatisfactory.

After the historian got the record room organized and the files arranged, the next question was how to check the records in such a way that the historian and the Record Committee would know exactly what each member of the staff was doing regarding his histories and other data.

That part of the record kept by the nurses has been well organized for many years, but it will take some time for the doctors to develop the necessary feeling of responsibility for their case histories, order sheets, operating sheets, etc. Of all of these the progress sheet has given the

most trouble. Many headings in the case histories still bear the legend "negative."

After considerable discussion and consultation with others, we adopted a "record checking book." This book provides for checking every item on the "Key card," history sheets, and record sheets. Along the left-hand side appears the name of the patient, the chronological number and the name of the doctor in charge. The rest of the book is arranged in columns designated along the top so that every item is provided with a column.

We do not consider that this form of checking is ideal and think that probably some other form might easily be adopted which would be an improvement. Nor do we think this form of checking is permanent. Our object was to know in the beginning of our plan just what each member of the staff was doing with his histories and records without its being necessary for any one except the historian to examine the records. Not even members of the Record Committee have ever examined the records of other members of the staff. No member of the staff has made any objections to this part of our scheme. However, before we had proceeded far with this method we found that this book also provided all of the statistical data which the hospital required for any purpose whatsoever. This greatly increases its importance to the hospital.

By this scheme the historian checks every item on every record. This does not require as much time as one might think and gives a very complete survey of the work. The reason for doing this will appear later. All of the records which the historian finds incomplete are placed in a cabinet which has a pigeonhole of the proper size to receive the hospital record for each member of the staff. These pigeonholes are labeled alphabetically. You will see at once that in this cabinet any member of the staff will find at the end of a given month all of his incomplete records arranged under his name, and the historian makes it a part of her duty to call him in at some convenient time to examine and complete them. Having them arranged in an orderly way greatly facilitates his checking them and adding missing data.

We are now ready for the monthly report. The form adopted by the college of surgeons is used. Our staff holds its meetings regularly on the second Tuesday of each month at a noon-day luncheon given by the Hospital. This gives the historian ample time to have her monthly report ready for the staff meeting.

In our staff room we have a large blackboard upon which the historian writes, each month, all of the conspicuous omissions and delinquencies in the records for the staff meeting. This is done without fear or favor and not infrequently members of the Record Committee find their names on the blackboard as having overlooked or neglected to supply important data. In our experience the blackboard showing has had a most helpful influence upon members of the staff. It is an object lesson. Our staff luncheon is served before our staff meeting and during the luncheon each member has a chance to note whether or not his name appears on the blackboard and if so, why.

We then take up: 1. The deaths. Each member is requested to explain his deaths during the month.

2. The unimproved patients, and they are explained.

3. Such other important items in the report as seem to require attention.

The Record Committee always reports on the progress and efficiency of the work and makes recommendations for its improvement. These usually elicit active discussion.

If a member is absent his report of "deaths" and "unimproved" are allowed to go over until the next meeting. If he is again absent, they again go over, but if he is absent a third time his records are referred to a committee to investigate and report. You may be sure that no staff member cares to have a committee report upon his "deaths" and "unimproved." One experience of this kind has been quite sufficient for any staff member. The fact that the patient's names do not appear on the record sheets makes it possible to do this without any risk of offending the relation of patient and physician.

The attitude of the record committee has at all times been that we are all learners and each one trying to do the best he can. If omissions occur we always take the ground that they are accidental and not intentional. We assume that it is only necessary to call the attention of the member to his omission and he will be glad to correct it. We have always avoided the least appearance of trying to coerce a member into following the plan. We have sought to lead them by admitting frankly that all staff members were more or less delinquent and that it is only by experience and by the realization of the desirability of keeping records that we improve them and finally achieve a reasonable measure of success.

The plan has been to take one step at a time and not expect that the members of the staff would produce perfect records at once. Progress is made by the development of experience. We know that it will take time, much more time and

patience than perhaps some of us are willing to acknowledge, to bring a staff to the realization of the value of well-kept records. We try to keep the fact prominently before our members that the whole scheme is to enable the doctor to give better care to the sick—that the best results can only be secured by coöperation.

In sending out notices for our staff meetings, the Secretary always gives notice of case numbers which the member should report on, but this is done in a way to be the least offensive to the member. This form is here shown.

The regular monthly meeting of the Medical Staff of Passavant Hospital will be held in the Staff room of Passavant Hospital on Tuesday, November 13, 1923, at 12:45 P M.
Luncheon at 12:00.

ELLSWORTH BLACK, Sec'y.

Please report Cases No. 18304, 18456, and 18589.

One important point has not yet been covered, namely, some way to present to the staff an annual summary of its professional accomplishments. This can be easily done by having the historian make a summary card of each case. In my personal records the original data are taken on cards arranged for the purpose. These are filed alphabetically under the patient's name.

The "Summary Card" is filed in the classified index under the appropriate heading.

Thus all similar diseases or operations fall together and at the end of the year it would be very easy to prepare for the staff a classified summary of the year's work. From the illustrations you will notice that the "Summary Card" proposed for the staff's records only differs from that used by the author in that the chronological record number is substituted for the patient's name, No. 5876. This again makes it possible to use the summary card and the record for purposes of study without divulging the patient's name.

This outlines our method up to the present time. It is of course incomplete and from the point of view of our committee is far from satisfactory. On the other hand we feel that we have made a beginning which is reasonably creditable. The difficulty in securing good histories is due to the fact that most medical men have been in the habit of depending on their memories regarding their patients and have not learned the use of histories and accurate records. Individuals here and there have kept histories and used them but most of these have not learned the value of coöperation. They have kept them because they felt personally the need of having correct and exact data about their patients as a mere matter of business advantage. History taking and record keeping as a coöperative enterprise is new in practically all of our smaller community hospitals. Certain institutions, especially teaching institutions, have found it necessary to keep well prepared histories for use in the clinic and in their writing.

Up to the present time the plan of standardization has given to the staffs of the various hospitals no very adequate and final reason why these histories should be carefully kept. The principal reason stated is that "the hospital is entitled to know what is done and to have it recorded." This reason has undoubtedly appealed to the members of the medical profession for the present, but the question arises as to whether a more sufficient reason will not have to be used for the future. Sometime a court will decide for us whether or not a member of the staff can be deprived of his membership for neglecting to keep proper records of his cases. Of course we all believe that the court would decide in favor of the hospital. No doubt every hospital has the same experience that we have, namely, that a few members, always the same, are the negligent ones, and that the majority are making a reasonably satisfactory effort to bring up their records.

Our Record Committee expects at some date in the near future to find it necessary to request the staff to recommend to the board of trustees the adoption of some such resolution as the following: "Members of the staff who persist in neglecting their histories and records are automatically dropped from membership," and to see to it that every new member of the staff and as many old members as possible subscribe to this resolution in writing, thus contracting definitely with the hospital to keep proper histories. We do not care to take this step, however, until every member has had a fair chance to learn the scheme and to realize its value.

Personally, I have kept fairly careful records of my cases for about twenty-five years, and these have been so arranged that they could be found either by the name of the patient or by the disease or disorder for which they were treated. I find it convenient to have my hospital records at hand in my office and in my medical library. It is easy to accomplish this by having the typist copy the hospital sheets and make them in triplicate. I mail one of these to the physician referring the case. I find the doctor appreciates a copy of his patient's record while at the hospital. I do not mean that we send him the nurse's record. That would be unnecessary. But we send him the history and the findings with

the final result. The other two copies are kept in chronological order and at the end of the year are bound into volumes.

One set of these bound volumes is kept at my office and the other at my medical library which is in my home. The scheme of binding into annual volumes I first saw in the library of Dr. Crile. No doubt many others do the same thing. I have added one feature which has proved of great value. You will notice that the five-year set has six volumes. One of these is an index volume for the five years. In fact, this index includes five separate indices as follows:

1. The names of patients alphabetically.
2. The name of the doctor referring the case arranged alphabetically, and under his name is that of each patient referred, with the diagnosis.
3. An alphabetical list of the diagnoses followed by the complications in each case.
4. The names of patients who died, with the cause of death following the name.
5. Index of deaths classified by causes.

This scheme makes the hospital cases a part of my working library and with the index makes any case or group of cases easily available for study and for following up the cases.

If you will bear with me for a few minutes longer, there is another phase of the subject to which I would like to call your attention. So far little has been said in the discussions of hospital records of their value for purposes of study. While a considerable number of individuals have adopted some system of classified records, only a few hospitals, and those usually under private management or dictation have developed such a system of records.

I wish to raise the question as to whether it would not be feasible and appropriate for the college to adopt some standard of classification for case records which could be generally used in hospitals. Many men after they have been in practice some years begin to wish that they had some means of studying their cases, and late perhaps in professional life adopt some more or less satisfactory scheme.

Many try to evolve a plan of their own which is soon outgrown or is found so defective as to be almost as cumbersome as going back to the original record. For twenty-five years I have kept a classified record of all cases, both hospital and private, on the Dewey Decimal System. This system was adopted because of its universal use in public libraries where it has been found adaptable to any form of literature. Another reason for adopting this system is, that more trained workers are familiar with it than with all others, so that one desiring expert help in handling records can readily find such help among library trained workers. The library schools are turning out every year many bright women who would make excellent librarians for hospitals. At least two who have been trained in our own public library and in our local medical library have found their way into large hospital libraries and one into a large medical school library. No doubt some of you are familiar with the Dewey System. There are many other plans, of course, but I have already stated the reason for believing that this is the best plan for our purpose. While other plans of indexing may be as good or even better for medical purposes, they lack the widespread use. They are not taught in the special schools. If we are to launch a widespread campaign for a classified index to our histories and records, a vast number of trained people will be required and these can only be found among the graduates of our general libraries and library schools.

The time is here when every large hospital should have the services of a trained librarian to take charge of its records. And in fact many hospitals which are not so large would find it greatly to their advantage to do this.

My argument is that a well-worked-out index, already thoroughly tried and widely adopted, is a better plan than any index which an individual or group can work out. Now that we are accumulating vast files of hospital records, and most progressive hospitals now, or soon will, employ an expert librarian, there is no reason why this association should not adopt and advocate some convenient plan of getting their case records summarized and classified so that any member of the staff can study all of the cases of any given class.

Our scheme of not having the patient's name appear on the record sheet does away with any objection which might be raised to members of the staff studying the records of other members of the staff. I adopted the summary card for my own cases over twenty years ago and they are classified under the Dewey System.

Before the case history is filed away, the summary card is made and this gives the essential data for each patient. If a more minute study of the patient is desired it also carries with it the chronological number by which the patient's record is found but it does not carry any information as to who the patient was. We believe that this plan does away with most of the objections which members of the staff might raise against the study of our hospital histories. It would not take a historian long to make such a card

for each patient. If these are filed in a classified index under some comprehensive system such as the Dewey, or any other system widely adopted by hospitals, the whole set of hospital records would become available for study.

NOTE: For detailed explanation of use of the "Dewey classification for Case Records," see "Black—System in Recording Cases," Journal of the American MedicalAssociation, March 6, 1909, vol. lii, p. 762–767.

CHAIRMAN MACEACHERN: You have heard three wonderful talks today on case records. I am sure both Dr. Long and Dr. Black will be glad to discuss any points with you further, either today or later in the week, if you have not time. Mr. Davidson, the superintendent of the Butterworth Hospital, tells me that Miss Morris will be here tomorrow, and I am going to ask Miss Morris to be around our Standardization Bureau as much as she can to tell you the different things about record librarian work.

The College is anxious to have all the hospitals became imbued with the idea of establishing a record department with a record librarian in charge, and I am sure that if you have any questions which you want answered, Miss Morris will be able to answer them. Our whole movement, we hope, will be one of service to you.

We are very favored today in having a gentleman with us who will present the laboratory side of the hospital, Dr. Ward Burdick of Denver, Secretary of the American Society of Clinical Pathologists. Dr. Burdick will speak on *Laboratories—an Adequate Laboratory Service in the Modern Hospital.*

WARD BURDICK, M.D.: As the representative of the American Society of Clinical Pathologists, it becomes my privilege to convey the appreciation of your courtesy in extending the privilege of appearing before this Convention for the purpose of expressing views on matters which so mutually concern us.

Upon receipt of the invitation to address this meeting on the subject of "An Adequate Laboratory Service in the Modern Hospital," a communication was directed to Fellows of the American Society of Clinical Pathologists, enclosing a questionnaire covering this subject, and this paper is a digest of the answers received. It has been the endeavor to make it express the net result of the experiences of all of the Fellows of the Society which I represent.

The first question for discussion should be:

Personnel. On this matter, there is a striking unanimity of opinion among the clinical pathologists. With reference to the head of the organization, Dr. O. J. West, Seattle, Washington, says: "All hospital laboratories should be in charge of a clinical pathologist on whom the responsibility for all work should rest." These words express the sentiment of all clinical pathologists from whom replies were received. This brings us to the pertinent question, "What is a clinical pathologist?" At the last annual convention of the American Society of Clinical Pathologists, the following definition was adopted:

"A clinical pathologist is a physician who has specialized in clinical microscopy, chemistry, serology, bacteriology, pathological histology, and gross morbid anatomy, for a period of two years under the direction of a clinical pathologist as herein defined."

Thus, at the outset, we find ourselves at variance with the American College of Surgeons on a very important point. Referring to the tenth Year Book of the College, issued during the present year, on page 53, paragraph 5, under the heading of "The Minimum Standard of Hospitals," reads as follows: "That clinical laboratory facilities be available for the study, diagnosis and treatment of patients, these facilities to include at least chemical, bacteriological, serological and histological service in charge of trained technicians." Dr. John Hewat, Director of Laboratories, Department of Health, State of Maine, states: "If a hospital has a fully equipped laboratory capable of undertaking all laboratory procedures, the object of the laboratory is defeated unless the responsible head is qualified, as defined by the American Society of Clinical Pathologists. The technical part of the work can, perhaps, be left to trained technicians, but a knowledge of the fundamentals of medicine is very essential in the interpretation of the results; therefore, the head of the laboratory should have a medical degree." For, says Dr. James C. Todd, Professor of Clinical Pathology, University of Colorado, "It would seem reasonable to ask that all clinical laboratory work of a hospital be done under the direct control of a clinical pathologist, and that there be a definite department of clinical pathology recognized at staff meetings."

EDITOR'S NOTE: A recent revision of paragraph 5 of the minimum standard requirements, as referred to in the manuscript, reads as follows: 5. That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis, and treatment of patients, these to include, at least, (a) a clinical laboratory providing chemical, bacteriological, serological, and pathological services; (b) an X-ray department providing radiographic and fluoroscopic services.

"In small hospitals," according to Dr. E. H. Buttles, Mary Fletcher Hospital, Burlington, Vermont, "perhaps under one hundred beds, he need not be a full-time man, but should have definite hospital hours." "But," insists Dr. Harry Corper, National Jewish Hospital for Consumptives, Denver, "every hospital of one hundred bed capacity should have a full-time

resident clinical pathologist, with an appropriate staff of assistants." To these sentiments every Fellow of the American Society of Clinical Pathologists subscribes, and we venture to say that were the American College of Surgeons to rewrite paragraph 5 in the light of present day advancement in our field, the term "clinical pathologist" would supplant that of "technician."

That there is a place in the sun for the technician is the opinion of all clinical pathologists, for, says Dr. Michael G. Wohl, Methodist Hospital, Omaha, "Lay technicians are valuable and absolutely necessary, yet, when it comes to interpreting laboratory findings as clinical symptoms, a Degree in medicine and several years' experience in hospital work are absolutely necessary"; but, warns Dr. J. H. Black of Dallas, Texas, "They should not be given autonomous positions." "Technicians," says Dr. A. H. Sanford, Mayo Clinic, Rochester, Minnesota, "are, in my experience, highly trained laboratory workers, preferably women working under someone's direction." My personal opinion with reference to this matter is, it must be admitted, somewhat at variance with that of the majority of my colleagues, as it has long been the belief of the writer that the chief assistant in the hospital laboratory should be a potential clinical pathologist, a young man or woman, who, having graduated in medicine and having served a proper interneship in a general hospital, elects to enter the field of clinical pathology as a life work. How else, it may be asked, may clinical pathology be perpetuated? The ever-widening circle of the application of laboratory methods to diagnosis, demands skilled physicians especially trained to meet the demands of the modern hospital; but from whence, pray tell, are the clinical pathologists of the future to come? I do not know of a single young physician serving an apprenticeship in a laboratory. Instances may exist and probably do, but they are hopelessly few. There are but two answers to this question: first, the encouragement of young physicians of scientific inclination to enter the laboratory as first assistants and, second, to again quote Dr. James C. Todd, Professor of Clinical Pathology, University of Colorado, "See to it that there is a strong department of clinical pathology in every medical college."

Returning, then, to the subject, it may be said that the personnel of the hospital laboratory should include first, a clinical pathologist; second, to interpose a personal view, a young physician in course of training to become a clinical pathologist; and, third, as many technicians as the requirements of the institution may demand.

Our next consideration is:

Location, Size and Arrangement of Laboratory Space. That the laboratory should be on the uppermost floor, remote from the dust, noise and vibration of the street, with a northern exposure and located as near to the operating room as possible, is the concensus of opinion expressed by the clinical pathologists; and, says, Dr. Charles Seitz, Evansville, Indiana, "Its location should be such that it will be freely accessible to the members of the hospital staff, in order to invite and encourage consultation with the clinical pathologist. In the event of its not being convenient to place it near the operating room, a small laboratory for frozen sections of fresh surgical material should be provided adjoining the surgical department." There should be at least five hundred square feet for every one hundred beds, "and the arrangement," says Dr. John Kolmer, University of Pennsylvania, with whom most clinical pathologists agree, "should depend upon the service required; but for a one hundred and fifty bed hospital I believe that the laboratory should be divided into the following four departments, with space set aside for each: (a) for the preparation of tissues and culture media, and general sterilization; (b) clinical pathology and clinical bacteriology; (c) serology, with special reference to the Wassermann test, and (d) biochemistry." To this allotment, many of our Fellows would add a private office and record room for the clinical pathologist in charge, and it is generally preferred that the above departments be provided with separate rooms. "In any event," says Dr. A. H. Sanford, Mayo Clinic, Rochester, Minnesota, "don't shunt the laboratory off into the basement."

"As to equipment," laconically replies one clinical pathologist, "the best is none too good"; but, advises Dr. W. W. Hall, Watertown, New York, "the best of apparatus should be obtained; do not buy apparatus until there is a demand for it; discard apparatus as soon as defective, and always buy duplicate apparatus that is breakable. In the opinion of practically all of the clinical pathologists, however, the fundamentals of equipment are as follows: Autoclav, Arnold Sterilizer, Centrifuge, Incubator, Microscope, Refrigerator, Microtome, Basal Metabolometer, Colorimeter, Water Still, Hemocytometers, and appropriate glassware, instruments, and chemicals for carrying on clinical microscopy, chemistry, serology, bacteriology, and pathological histology, which, thinks Dr. A. V. St. George, Bellevue Hospital, New York City, "can usually be purchased for around $1,500. This would equip the average

one hundred to one hundred fifty bed hospital laboratory. It is obvious, however, that the size of the institution will largely govern the amount of apparatus required." The writer would be inclined to make the latitude "around $1,500" rather liberal so that it might be stretched to $2,000 if need be, particularly in view of present prices.

Scope of Service. Now, in terms of golf, the ball has been knocked out into the rough, for here will be encountered several moot questions: first, what tests, if any, should be done as a matter of routine, taking into account both medical and surgical cases? "Routine blood and urine analysis," answers Dr. George L. Bond, Grand Rapids, Michigan, with which ninety-six per cent of the clinical pathologists agree. "These tests reveal so many conditions that influence treatment, that the attending physician should have them in every case"; and, adds Dr. L. H. Cornwall, New York City Hospital, "they are a necessary part of every record before diagnosis can be made with accuracy." Says Dr. Foy C. Payne, Dayton, Ohio, who voices the opinion of forty-seven per cent of his colleagues, "a Wassermann should be done routinely on all chronic cases." We are also reminded by several not to overlook a routine throat culture and vaginal smear in children as well as the determination of coagulation and bleeding time on all tonsil and adenoid cases. Other tests, such as basal metabolism, blood chemistry, kidney function, blood typing, etc., were occasionally mentioned in the replies; but, avers Dr. A. B. Giordano, South Bend Medical Laboratory, South Bend, Indiana, "These three tests, namely, complete blood count, urine analysis, and Wassermann reaction, will in a great many cases reveal evidence of disease process which neither the patient nor physician is aware of." My own views as to hospital laboratory routine coincide with those expressed by Dr. John R. Porter, Rockford, Illinois, who says, "Urines and blood counts on all, sputum on all chest cases, blood culture on all temperatures of 102° F.; throat cultures on all suspects and undiagnosed cases; stools on all diarrheas and smears and cultures on all discharges, for," continues Dr. Porter, "the average clinician does not know exactly what laboratory examinations his patients should have, so he does not order them, and the above will many times clear up the case before the tests suggest themselves to him." "Furthermore," as Father Moulinier is wont to remind us, "the patient in the hospital is the object around which everything should revolve." The clinical pathologist should be one of the patient's closest relatives during his stay in the institution, and he should not be hampered by formalities during the application of his endeavors to elucidate the cause of disease. His advances should be welcomed by attending physicians as an integral part of hospital service and to which his patient is entitled.

With reference to surgical cases, it should be an axiom that no cutting operation, however small, should be undertaken—with the ever-present liability of infection—without first ascertaining the status of the blood as a matter of record; and, says Dr. Edward Mugrage, Assistant Professor of Clinical Pathology, University of Colorado, "the urine should always be checked in order to observe any renal disturbances which might otherwise be overlooked; and which would influence the choice of the anæsthetic." It is the concensus of opinion that the histologic structure of all tissues removed at operation should be made a matter of record, not only as a check on clinical diagnosis, but as evidence which may be of inestimable value to the patient or his relatives at some future period, to say nothing of the statistical worth of such archives.

Now, another question—Should activities of the hospital laboratory be limited to the institution alone or may its scope of service reach out beyond the confines of the hospital? On this point the clinical pathologists seem to be equally divided. "Most emphatically, yes," says Dr. B. W. Rhamey, Fort Wayne, Indiana, representing one extreme. "They should confine their activities to the institution alone. Hospitals have no business going into competition with men making a specialty and life work of this branch of medicine. That would be another phase in the advance toward State medicine." But, says Dr. Ralph G. Stillman, Department of Pathology, New York Hospital, representing the other extreme, "I see no reason why the hospital laboratory should confine its activities to the institution, providing its personnel is large enough to handle the necessary work. The offer of diagnostic aid to practicing physicians in the neighborhood of the hospital, and on the hospital staff, broadens the service of the institution to the community, and establishes for the institution a permanently interested clientele that is of value both to the institution and to the community. No hospital that fails to act as a center for the dissemination of information concerning the prevention, diagnosis, and treatment of disease is fulfilling its entire duty." The writer prefers the middle ground with Dr. M. W. Lyon, Jr., of South Bend, Indiana, who says "if the clinical pathologist in the hospital is the only one in the community, he may reach

outside; but if there are private practicing clinical pathologists in the community, the hospital laboratory should keep to itself." For, after all, the development of clinical pathology as a specialty in medicine should not be impeded.

We are now face to face with another problem reflecting upon the scope of service of the hospital laboratory, namely, that of financing this department of the institution. This brings us deeper into the thicket of uncertainty, and constitutes the "fly in the ointment" of coöperation in this phase of hospital standardization.

Financing. Adequate laboratory service will not be realized until the true status of the clinical pathologist is recognized by all classes of physicians. From the most remote time up to, say, twenty years ago, the contact of the medical profession with the laiety was chiefly through one man—the family doctor. About this time there appeared a third party, the clinical pathologist, whose function it was to develop methods for the practical application of scientific facts which were rapidly being brought into light by the medical research laboratories of the world. The newcomer was acclaimed by physicians and surgeons alike, who paid their compliments with a shower of material to examine gratis. But it was soon evident that a definite department of medicine was developing which required to be maintained and the present confusion proceeds from the reluctance on the part of the firmly grounded practitioner to so modify his demands upon the public that the clinical pathologist might derive his share of financial support. A comparison of the skill of the clinical pathologist involved in condemning a breast or a limb, with that of the surgeon who removes it, would be as likely to balance in favor of the former as the latter; but a considerable difference in compensation still obtains. That the public pays enough for medical service is obvious, and it is hoped that the handwriting on the wall will not escape the attention of those concerned, for the person who is not indifferent to the signs of the times may with safety predict that State Medicine will be the inevitable outcome if the cost of medical and, particularly, surgical service continues to increase.

As to methods in vogue at the present time for financing clinical pathology in the hospitals, an analysis of the questionnaires reveals a complete lack of uniformity, and one is at a loss to make any recommendations. For the time being, however, we must proceed upon the thesis that the clinical pathologist is a consultant in medicine and should be compensated accordingly the same as the surgeon or internist. Regarding the so-called "flat fee," a majority of the clinical pathologists agree with Dr. Philip Hillkowitz of Denver, who says, "a flat fee is permissible only for routine urine and blood examinations; that the hospital laboratory should be financed by charging each patient for work performed; while for the more complicated tests, the usual fees in vogue should be charged and after proper deduction is made from the total monthly laboratory income for expenses of laboratory supplies, salary of technicians, interest on investment, expense of rooms, light, heat, etc., the balance should be regarded as the compensation of the clinical pathologist."

In closing, may I suggest the appointment of a committee by the American College of Surgeons to coöperate with a similar committee from the American Society of Clinical Pathologists, to formulate a plan of financing the department of clinical pathology in the hospital?

To summarize, then: the personnel of the hospital laboratory should consist of a clinical pathologist in charge, a young physician in training for clinical pathology, and as many technicians as the work of the institution may require. It should be located adjacent to the operating room, preferably on the top floor, with a northern exposure, and subdivided into five rooms, including a private office for the clinical pathologist. The equipment should be adequate for the carrying on of all of the necessary tests in clinical microscopy, pathological histology, bacteriology, serology, and chemistry. As a matter of routine, the laboratory department should determine the condition of the blood and urine of all patients entering the hospital, and write into the records of the institution the results of histologic examination of all tissues removed at operation. A Wassermann test should also be done as a matter of routine, at least upon chronic cases. The clinical pathologist should be freely employed as a consultant by the staff, and it should be considered his privilege and duty to perform any tests which, in his judgment, might throw light on the condition of any patient. The activities of the hospital laboratory should be confined to the institution alone, unless it happens to be the only available center of clinical pathology in the community. The evolution of a satisfactory method of financing clinical pathology in the modern hospital is a matter for future determination and especially in the province of the committee suggested.

CHAIRMAN MACLACHLAN: I am sure you all feel that we have had a real treat. You will find the papers which were read this morning published in the 1924 *Bulletin* and you will receive one in your hospital, particularly if you have registered.

During the past six weeks on an extensive tour where we had audiences ranging from fifteen hundred to six thousand, we had with us Dr. James T. Case of Battle Creek. He is with us today and I am going to ask him to limit his talk to fifteen minutes. I want Dr. Parkes of Evanston to have his group ready to start sharply at eleven-thirty on the staff conference.

Dr. Case is surgeon to the Battle Creek Sanitarium and Director of the Radiological Department. In addition he is Professor of Roentgenology, Northwestern Medical School, Chicago. We made him speak six times every two days during his tour with us, and the people were not a bit tired listening to him. I am going to ask him to talk to you for fifteen minutes on *The Fundamental Requirements of an Efficient Service in Hospitals*.

JAMES T. CASE, M.D.: Mr. Chairman, Ladies and Gentlemen: I shall have difficulty in filling fifteen minutes. I promise not to go over the time. I was talking on topics on our trip which were of more interest to me from a clinical standpoint than what I have to say to you this morning.

In order to make my remarks follow each other, I have written down some notes and I shall follow the notes.

THE FUNDAMENTAL REQUIREMENTS OF AN EFFICIENT X-RAY SERVICE IN HOSPITALS

An X-ray department requires equipment more or less complete according to the service it is expected to render. If it is expected merely to make "pictures" of dislocations and fractures, possible kidney stones or other opaque foreign bodies, the thorax, and other conditions in all of which the referring physician or surgeon feels himself perfectly able to make the interpretation, the equipment and personnel need not be very extensive. If the staff desire to utilize the X-ray aid available in a well-equipped hospital to the fullest degree possible under modern conditions, a generous equipment, plenty of space, and adequate personnel, both medical and technical, are absolutely necessary.

1. *Equipment and Space.* It is needless to list the individual roentgenologic instruments required other than to say that an adequate X-ray service demands the provision of the complete roentgenographic equipment (interrupterless transformer with the capacity of 75 or more milliamperes, tube stand, table, provision for stereoscopic roentgenograms of various parts, including the chest); fluoroscopic equipment for study in both the horizontal and vertical positions; viewing box; stereoscope; and a dark room for the loading and development of films. For occasional X-ray treatments the roentgenographic equipment may ordinarily be employed; but where there is much therapeutic work to be done, a separate room and separate equipment should be made available. Modern deep X-ray therapy requires the installation of an apparatus capable of delivering to the tube a minimum of 4 or 5 milliamperes at 200,000 volts.[1]

There is now generally available generating apparatus not only capable of delivering the 200,000 volts at 5 milliamperes current needed for deep therapy, but also available for ordinary roentgenographic work, thus economizing space and apparatus. For small hospitals this generator may serve both the roentgenographic and the treatment rooms. There is no question that the roentgenographic apparatus generally supplied up to three years ago (ten-inch gap machines) may be employed satisfactorily for many X-ray therapeutic purposes, especially in the treatment of superficially seated malignancies, various skin lesions, tuberculous glands and joints, and certain blood disorders, and even in the treatment of fibroids and some other causes of menorrhagia; but for deep therapy, in its true sense as now employed at 200,000 volts or more, a specially constructed deep therapy apparatus must be supplied.

The matter of intensifying screens is an item of no small importance in X-ray equipment. The initial outlay for screens is fairly expensive, but their careful and economical use leads to a very great saving in tubes and a very marked improvement in the quality of those exposures which must be done more or less instantaneously to be of value.

The space in which to assemble and work the equipment is one to which too often only scant thought is given. Even in many of the larger hospitals today one finds all the different instruments above outlined crowded into such small space that it is difficult to pick one's way between the apparatus. It is a wonder that we hear of so few accidents occurring in X-ray departments. Some of these few, however, have been tragic. In some quarters there seems to be a hold-over of the idea of fifteen or twenty years ago that the X-ray department, being more or less analagous to the photographic department, requires only one or two rooms for its functioning; and as new equip-

[1] Since August 1, 1923, I have had the privilege of employing the most powerful X-ray tube in the world. Thanks to the inventor we have the first water-cooled Coolidge tube released from the factory. This powerful tube permits the employment of up to 50 milliamperes at a maximum of 250,000 volts, sustained output, continuously from one tube. It is apparent that this type of tube bids fair to displace the air-cooled tube nowadays commonly employed in deep therapy.

ment has been acquired, it is thrust into the old cramped quarters. Hospital directors who begrudge the space demanded by the roentgenologist would do well to visit such institutions as the Battle Creek Sanitarium, the Mayo Clinic, and the University Hospital at Ann Arbor, indeed almost any one of the larger teaching hospitals, to realize the importance conceded to the X-rays as demonstrated by the generous space allotted to this department.

It may be more or less tentatively stated as a minimum that a hospital of 50 beds should have at least 400 square feet of floor space devoted to X-ray work. Up to 150 beds, there should be not less than 650 square feet of floor space divided into rooms for treatment, roentgenography and fluoroscopy, dark room, and office. Larger hospitals should have from 1,200 to 3,000 square feet including treatment rooms, roentgenographic and fluoroscopic rooms, office, film loading and developing room, film consulting room, filing room, lavatories, and waiting room, and a work room for mechanical developments. University and teaching hospitals need even more space for the provision of the necessary equipment for teaching purposes.

It would be axiomatic to declare that no amount of luxurious equipment will make up for the lack of a competent physician-roentgenologist or that the roentgenologist cannot render a full measure of usefulness to the staff without adequate facilities. Furthermore, it is self-evident that the type and arrangement of the equipment will differ in the different classes of special hospitals, for the X-ray department is but one of the clinical diagnostic departments and the proper prospective must be maintained according to the ability of the hospital board to equip and staff its various sections.

2. *Organization.* The hospital of 50 beds or more should certainly have its physician specializing in roentgenology. He may be only the visiting roentgenologist, having other work elsewhere, and in smaller towns he will probably be a man who devotes only part of his time to roentgenology, combining it with nose and throat work, anæsthesia, pathology, radium therapy, or some other speciality. There are in this country something like 2,000 hospitals of 50 beds or more. Are there available 2,000 physicians especially trained in roentgenological work who are willing to accept this very interesting specialty as their major work? In the evident absence of any such number of available roentgenologists, it is recognized that in many small hospitals, especially those situated in the smaller communities, no physician is available, however ideal it would be to have one. The staff send their patients for roentgenological study, each reading his own film records, and making his own fluoroscopic studies, if indeed any are made.

It is manifestly impossible and unthinkable to permit or expect any one but a physician to undertake the interpretation of the roentgen findings with any hope of transmitting to the clinician all the help which the X-ray is capable of giving. There have been some notable exceptions to this statement, but they have numbered very few indeed; and with the ever-widening field of roentgen application the usefulness of any one but a graduate physician for roentgen interpretation is steadily decreasing. Even in the small community just referred to, where nowadays each physician makes his own interpretations, it would be not only ideal but in thorough sympathy with the principle of hospital standardization and mutual coöperation between physicians thereby involved, if the agreement could be reached that one of the physicians in the community should devote special attention to roentgen interpretation and act as consultant in this capacity. Even under these circumstances, the members of the hospital staff should not hesitate to avail themselves of consultation with roentgenologists more favorably situated in large centers whose opinion could be obtained by sending X-ray records and clinical data for consultation.

A hospital of 150 beds or more should not be considered completely staffed without a physician-roentgenologist who devotes full time to his work. He may devote his services to more than one hospital, but his major time and thought should be devoted to perfecting himself in his roentgenological work and to reaching out into new lines of X-ray development. He may spend only a few hours a day in the hospital and the rest of his time in his office outside the hospital; or the hospital may wisely arrange for his private work to be conducted in the institution. Still larger hospitals doing general work should have the full time services of a physician-roentgenologist. Especially in this type of institution the roentgenologist may advantageously combine his X-ray work with radium therapy and the various surgical procedures which are more commonly involved in the application of radium.

3. *Technical Help.* The X-ray technician should never attempt to extend his activities beyond the technical work into the domain of diagnosis. No matter how competent, it is manifestly no more proper for an X-ray technician to attempt the interpretation of X-ray findings than

for a competent surgical nurse to undertake surgical operations. I have no doubt that there is here and there a surgical nurse who, under favorable conditions, could safely amputate a finger or a foot, or even a limb, or remove the appendix; but this surgical nurse would be the last one to wish to undertake such a venture. Diagnostic work lies beyond the province of the technician whose interests and training should be centered on the care and manipulation of X-ray equipment. His or her time will be more than fully occupied with the problems of the ever-sought but never attainable perfection in roentgenographic technic.

Naturally the X-ray technician's work deals with roentgenography, not with fluoroscopy. A well-trained technician will have a knowledge of the fundamentals of electricity, the principles of construction of the X-ray apparatus of various kinds and the care of the apparatus, the physics of light, a sufficient familiarity with anatomy to intelligently "place" his patient for examination, and an accurate knowledge of the exposure and development of roentgenographic films. Proficiency in this technic was formerly much more difficult of attainment when gas tubes, mercury breaks and other forms of interrupters, coils, and static machines were employed, but nowadays the X-ray equipment has become sufficiently standardized to permit standardization of roentgenographic technic.

A concerted effort should be made to establish a standard of training for X-ray technicians, and provision should be made for proper certification of this training when it has been attained. The American College of Surgeons could, it seems to me, properly and very helpfully exert great influence in this matter. In the smaller hospitals, one technician will suffice for all the manipulative work in the X-ray department and he or she may also be trained to do the clinical medical "photography" needed in such a hospital. Larger hospitals have the technical work divided among several helpers. In the highest type of X-ray department there will be a place for a trained physicist to aid in the development of the technical X-ray work and guide in the technical aspects of research work in radium and roentgen therapy.

4. *Interpretation of Findings.* The technical work of the X-ray department, including the production of the roentgenograms and the setting in operation of the fluoroscope, is but the preparation for the real medical work of the X-ray department, its real *raison d'être*, namely, the interpretation of the findings. The work of interpretation constitutes medical roentgenology and it must be done by a physician. The better the technical work the richer will be the roentgen findings in information for the medical roentgenologist to interpret. The greater his training, the richer his clinical experience, the fuller his devotion to his work, the more will the medical roentgenologist see in the film and screen records of the case. Some do the fluoroscopic examinations in a perfunctory manner because they obtain from them little help, but the enthusiastic, well-trained, experienced clinical roentgenologist will find in the screen study of his patient a veritable mine of information and his ingenuity will constantly show him ways to reach out into unexplored avenues.

The average physician of today is not well fitted to undertake X-ray interpretation. This may be said even of many men into whose hands the roentgenological interpretation is at present confided, but there are outstanding figures scattered over the country, and by no means all of them connected with a large hospital, who are by nature, education, previous experience in pathology, surgical or clinical medicine, as well as special training in roentgenology, armed with the necessary clinical knowledge to aid them in their technical work.

Unfortunately, there are in this country not many organizations interested in the preparation of roentgenologists. In England, the University of Cambridge and the University of Liverpool have now established courses covering a year, leading up to an examination and a diploma in medical radiology and electrology. I hope the day will come when similar arrangements will be provided in North America. It would be a great help not only to roentgenology but to surgical and medical work in general if three universities, say for instance, Pennsylvania, Toronto, and California, would establish courses covering the necessary training in physics and technic and the clinical applications leading up to a similar diploma. The American College of Surgeons here again could render great service in sponsoring such a move.

X-ray interpretation must be done by a physician who has had special training if the X-rays are to be utilized to the fullest degree. The gynecologist, for instance, in making a bimanual examination of the pelvic organs, visualizes what he feels. In his mind's eye, he pictures an image in flesh and blood the mass which may be due to ovary, tube, fibroid, cyst, etc. In a similar way, the roentgenologist-interpreter must visualize in flesh and blood what he sees in shadow—not a defect, a displacement, a crater, an enlargement, a contraction, a thickening, a thinning, a light or a shadow,

but the actual lesion. He must see the ulcer, the cancer, the tumor, the stricture, the cavity. This is relatively impossible without a basis of experience in pathology or surgery.

The X-ray department is not engaged in work of a kind where the answer to the problem is found by looking up certain formulæ or watching for the development of certain reactions; for the reactions when obtained (e.g., the film or screen image) still require interpretation. This takes the X-ray work out of the general class of laboratories and puts it among the examining departments such as the urologic, ophthalmologic, electrocardiographic, etc. Indeed it would be better if the term X-ray "laboratory" were abolished and we spoke of the X-ray "department" or the X-ray "examining department." The primary object of an X-ray department is not to make "pictures" but to supply information.

Much of the work leading to the production of this information should be done with the fluoroscopic screen. We see so much fluoroscopy done in a perfunctory manner without any real appreciation of the value of its method. In many hospitals the gloved hand of the examining physician is never placed beneath the fluoroscopic screen. The value of visualized palpation by the protected hand slipped under the fluoroscopic screen cannot be fully appreciated by one who has not done it. The ability to move the stomach, the bowel, to watch the excursions of the diaphragm, the beating of the heart, the ever-changing shadows, when one rotates a patient under the fluoroscopic screen, to observe the behavior of a joint or a fractured limb under fluoroscopic manipulation, all constitute advantages available under screen examination which cannot be overlooked or set aside. As hinted in an earlier paragraph the circumstances may be such in some hospitals that the individual staff members must interpret their own findings, but here again I wish to suggest that the spirit of mutual self-help and coöperation will point a way by which at least one member of the staff can acquire special training for interpretation and assist his fellows in their work.

In the light of what has been said, it is apparent that the interpretation will be all the more valuable and helpful if the roentgenologist is furnished with the history and such clinical data as is available up to the moment of the X-ray examination. The roentgenologist should not be treated as though he were perpetually on examination and each patient sent to him as a catch problem, but he should be looked upon as a colleague and be provided with every fact likely to assist him not only in the interpretation of the case in hand, but in his development into a better, broader, and more useful clinician.

5. *The Record.* The record should be made in writing and should be furnished at least in triplicate—one copy for the attending physician, one copy for the X-ray department, and one copy for the hospital archives. Whether or not the patient acquires a copy of this report will depend upon the custom of the hospital. In the Battle Creek Sanitarium, we feel that the X-ray report should contain only such statements as are capable of substantiation by film or screen examination. In other words, although the roentgenologist is furnished with all available clinical data to aid him in his interpretations he must not in his written report break over the bounds of the roentgenological findings. The report therefore constitutes only a part of the clinical examination of the case and the roentgenological report as such has no business in the hands of the patient. The patient surely is entitled to a written summary of his case, this summary to be made bythe clinician in charge of the case. In this summary, the X-ray report should find its proper place.

To whom do the films or plates belong? Surely not to the patient, for he pays not for a "picture" but for an examination, and he is no more entitled to the "pictures" than he is entitled to the cover slides containing the microscopic sections of tissue in his case, nor the smears of blood used for making ordinary or differential blood counts. The X-ray films constitute only a part of the examination and really form a necessary part ofthe record. If we say that he is entitled to a copy of his X-ray "pictures" merely because the X-ray records are capable of being printed, why not extend the idea and give the patient a photograph of the proctoscopic or vaginal examination or a photograph of the eyeground or the larynx or the pharynx? A relatively small outlay of cash will provide apparatus for making photographs in connection with proctoscopic, vaginal, cystoscopic and other similar examinations, and so on *ad absurdum*. As a matter of fact, the X-ray films belong to the hospital where the patient's records are kept. In sympathy with the plan of hospital standardization carried on by the American College of Surgeons, this should be made a rule. Prints or films in the hands of patients lead only to false interpretations, confusing opinions, multiplicity of advice, and bad results. Wise laws are being passed in a number of states and provinces requiring the hospital to retain their X-ray films for two years or more.

A film library should be organized and cross-indexed. It would be a very valuable thing if

every hospital would have a film library of say 600 or 1,000 films, the library to be limited to this number, the films properly sorted out and classified according to the pathological findings shown. I would suggest that the number of films be *strictly* limited and that no additions be made except where the additions are superior in quality or in rarity of the lesion to films already in the collection which will be discarded for the new ones. Such a library, cross-indexed and with suitable notes, will prove of great value to the staff in many ways.

Frequent discussions concerning the work will be necessary and in my experience as regards X-ray work they are seldom lacking. A certain number of staff meetings each year should feature the roentgenological work. The science of roentgenology is almost as broad as medicine itself, and every department should participate in the discussions.

CHAIRMAN MACEACHERN: Father P. J. Mahan of Chicago, Vice-President of the Catholic Hospital Association, was detained and could not get here this morning. Dr. Arthur C. Scott of Temple, Texas, Senior Surgeon, Scott-White Hospital, is here. Dr. Scott will discuss the symposium.

ARTHUR C. SCOTT, M.D.: Mr. Chairman, Ladies and Gentlemen: I regret exceedingly that I was not here in time to hear the first paper this morning, but I was in no way responsible for the wash-out down in Southern Oklahoma and the lateness of my train. I am sorry that I did not get a chance to hear Dr. Woods' paper that touched on the phase of this symposium which I feel most interested in.

There are a great many handicaps in standardization and, ordinarily, when we attempt to discuss it we begin at the wrong end; we get to talking about the various employees in this department or that one, or the equipment of some particular phase of the hospital.

The real question of standardization should begin back with the people who are responsible for the hospital—the average directors, laymen, who sometimes know little or nothing about hospitals. If they do their duty they will spend years in familiarizing themselves with those things necessary for the development of an efficient institution.

The Board of Directors, as you know, are more or less uniform and they are usually philanthropists. The very first blunder I made was in the selection of a staff composed of men not properly qualified for the particular task in hand. It seems to me that the best thing that a Board of Directors can do and the biggest task they have on their hands is to find some one individual, as chief of staff, who is thoroughly trained, someone who is scientific, someone who understands the hospital game from start to finish, someone young and capable of development who is honest at heart and whose purposes are of the best character.

A secondary consideration should be buildings. These should be erected only according to the needs and the ability to finance their operation. Questions of equipment must also be secondary. Of course, any Board of Directors who have good business sense (and most of them have good business sense) should place a limit on the annual expenditures. After selecting the chief-of-staff, who is a medical man, about the only function they should take part in is to aid him in the selection of a competent dependable superintendent, and when that is done the average Board of Directors should take a vacation and adjourn for three hundred and sixty-five days, and then call upon the man whom they have selected, for an accounting. In the meantime he should have *carte blanche* to organize a staff.

CHAIRMAN MACEACHERN: I am sorry to interrupt, but the time is up. We will ask Dr. Scott and the others to continue this discussion at the opening of the afternoon session.

Dr. Mock is operating this morning. If he and Dr. Cameron are here after two o'clock we will ask them to participate, too.

We must commence the staff conference demonstration. I want to introduce to you Dr. Charles J. Swan, Chairman of the Evanston staff, who, with his confrères, has been kind enough to arrange this demonstration.

CHARLES J. SWAN, M.D.: Ladies and Gentlemen: The Evanston Hospital staff has been invited by the College to demonstrate a model staff meeting for a two hundred and fifty bed hospital. Now, this staff meeting which we will depict here is not absolutely typical. I think it is possibly more harmonious than some we have held. We occupy two or three hours with our meetings. We have a monthly business meeting, a clinical meeting, and a weekly laboratory conference. We will attempt in this one to minimize and crowd all three of these meetings into one hour.

(Dr. Swan then called the staff to order. They took up the minutes of the last meeting, the various reports of special and standing committees and dealt at length with an analysis of the work of the hospital for the month. This demonstration was most instructive to all present.)

EDITOR'S NOTE: The details of the staff demonstration were so extensive that a full description could not be included in this manuscript.

(Meeting adjourned at twelve-twenty-five noon.)

AFTERNOON SESSION, OCTOBER 23, 1923

THE meeting convened at two-ten o'clock, Dr. Malcolm T. MacEachern presiding.

CHAIRMAN MACEACHERN: Is there any discussion on the papers of this morning? Is Father Mahan here? He was detained this morning and could not be with us. (Not here.) Is Dr. Scott present? He will finish his discussion.

ARTHUR C. SCOTT, M.D.: I assure you that it is not very easy to take up the trend of thought just where we left off without impairing the general clearness of what I want to say. However, since we were so crowded for time this morning, it was impossible for me to say many things which I intended to say. I was glad indeed to be interrupted by the Chairman for the purpose of seeing the splendid demonstration of the staff meeting. I think it was one of the most wonderful presentations I have ever seen at any of the College meetings. It would be a great thing if the directors of the College should see their way clear to repeat something of this kind every year.

In the matter of standardization, I had just made the point this morning that the chief duty of a Board of Directors was to select one individual who had the right qualifications to become the leader of a hospital, and then they should select a superintendent and turn practically everything over to those two persons. I believe that the superintendent ought to be under the direction of the chief medical man of the staff. These two men must have certain qualifications. The superintendent should by all means have money back of him, and authority to spend it whenever needed.

The chief-of-staff should have certain qualifications which are indispensable. First of all, scientific ability. He should have the very highest ideals; he should have executive ability; and he should be fair-minded. He should have authority to proceed whenever he has come to the conclusion that a thing is right. The chief-of-staff and superintendent, of course, will always have to coördinate their work and to do so they must have the most perfect coöperation. Then, as I intimated this morning, the chief surgeon should be given *carte blanche* to organize a hospital staff and put over whatever is necessary to place it on a high basis.

The matter of selecting a staff is a most difficult thing. I have been fortunate in having this task to perform for about thirty years. The biggest job I have ever had in my life was that of selecting men who were fit to fill certain positions. I was told here in Chicago some years ago by one of the leading gentlemen of the Union Pacific Railway System that the biggest job he had was to find men who were capable of being superintendents; and in the selection of doctors it is absolutely necessary to take into consideration several things. To me, in the selection of physicians for certain positions, the most important thing of all is to find a man whose purposes are honest, a man who is honest through and through, inherently honest, and then, a man who has an active mind, one who has a prospect of developing into somebody worth while. I once heard a nursery man, in speaking boastingly of his nursery stock of fruit trees, say that his stock of fruit trees were hand picked and home grown, and I have often thought of that in its application to members of a hospital staff. If they are first "hand picked" and then "home grown" they are more apt to grow into a perfect organization running like a well matched piece of machinery.

It is exceedingly difficult for men who are in the automobile business to buy the different parts necessary for the construction of an automobile in different factories, and make them work, and that is precisely what the Board of Directors often attempt to do in assembling a hospital staff. They reach over here and pick one doctor because he has a reputation as a good eye, ear, nose and throat man, and pick another because he is a good internist, and has a large practice. They pick a surgeon somewhere else because he has a big practice among a certain group of influential people in a city, and when you bring them all together it is like assembling the parts of a cheap automobile. They do not fit. All may be men of high type; they may be very capable men, but each one has a selfish interest which precludes him from fully appreciating the needs of a hospital organization independent of his personal interests. It is needless to say that men who are picked for a hospital staff should be well trained men. If the one who has the responsibility of choosing the hospital staff is unable to find men to fit certain positions, it is necessary for him to see that they are trained and in many instances the home training is most apt to fit the individual case.

Wherever it is possible,—I recognize the fact that this suggestion is not going to be well received by most people—I believe that an ideal hospital staff should be made up of duplicates—I mean duplicate individuals—in each particular specialty. I believe that two eye, ear, nose and throat specialists should be had, two pathologists,

two roentgenologists, two internists, two general surgeons, two ophthalmologists and so on all down the line of specialists. I think that every hospital should have two anæsthetists. I understand that this ideal cannot always be attained in the early days of development of a hospital, but the special things to be gained by that sort of an arrangement in a hospital staff are realized because of the fact that when men are grouped together and have a common interest in the welfare of the institution, they may check on each other. We are all human; no matter how well trained we may be, we are all subject to errors; there is not a man in this room who does not make some errors perhaps every week, but when one man can check on the other without personal offense we find at once we are arriving at a high state of efficiency. If a pathologist comes across a bit of tissue about which there is the slightest doubt, he can call the other pathologist from the next room and say, "Take a look at this tissue, I am a little in doubt about it. What do you think of it? I am not just exactly certain." When you put the two heads together and have one common interest you are more apt to get a high degree of efficiency. That same thing applies to all departments of the work. When two internists are putting in the greater part of their time on physical diagnosis and correlating the information which is obtained from the different laboratories or the institutions, they are more apt to arrive at a correct diagnosis.

CHAIRMAN MACEACHERN: We have had an excellent representation from Texas, in the persons of Dr. Scott, Dr. Miller and Mr. Jolly, who have contributed so liberally to this program. We are very grateful to these men; we have heard their messages. We have been through that country and find them living up to all they preach.

Is Dr. Harry Mock here? (No response.) Dr. Cameron of Toronto? (No response.)

I will now turn the meeting over to Mr. E. S. Gilmore, Superintendent of the Wesley Memorial Hospital, Chicago.

(Mr. Gilmore takes the chair.)

CHAIRMAN GILMORE: It is not the man at the table who makes the round table conference a success; it is they who are going to do the talking.

We have a full program, a large number of people will speak and, as you know, the rule is that the speaker will take five minutes and those who discuss the question will take two minutes.

That does not seem a long time, yet I believe that a man who has an idea that he cannot propound in two or three sentences has it so clouded in his own brain that he could not do much with it if he were given an hour, so we will start out by asking Dr. Frederick W. Slobe of Chicago, who was formerly in charge of the hospital standardization department of the American College of Surgeons, to talk to us on: *Responsibility and Liability of the Hospital in Regard to Care of Patients.*

The superintendent writes, "The Board of Trustees of our hospital would like to know if they assume responsibility and liability when they admit a surgeon as a member of the regular or courtesy staff, or is the surgeon alone responsible?"

FREDERICK W. SLOBE, M.D.: The question of hospital liability has attracted a great deal of attention during the past five years. Perhaps the most important reason for this attention is the standardization program for hospitals. Hospitals today are taking much more interest in case records than they did formerly; they are insisting on more accurate laboratory examinations and, above all, they are discriminating much more carefully in their staff organization and especially in their selection of staff members. As a result, in some instances certain physicians who had their hospital privileges restricted, have instituted damage suits against hospitals. Some of these damage suits have been for large sums of money and have attracted rather wide attention.

The legal aspect of this situation has been definitely clarified during the past few years. Until recently the courts have had a conflict over two phases of this situation, one duty of the courts being, of course, the insuring to the public of the best hospital care, and secondly, the courts had to protect hospital trust funds. If they awarded some individual a large amount of money in a suit against a hospital they could not at the same time protect the hospital trust fund, and this confliction caused much trouble for years. During the past two or three years, however, the courts have compromised and they are now holding hospitals more and more liable for the medical end results, but exempting them if they have conscientiously exercised due and reasonable care in the selection of staff membership. Exercising due and reasonable care is then the great prerequisite and the great safeguard for hospitals to have.

There is very little distinction made as to the type of hospital, whether private or public, or as to the type of patient, whether free or private, because naturally every patient is entitled to the same type of protection in a hospital. A decision was handed down last year in Ohio in which it was stated that where a public, charitable hospital failed to exercise due and reasonable care in its selection of physicians, nurses and attendants, and where injury resulted as the result of incom-

petence or negligence of such agents, the hospital was liable, and judgment was rendered against the hospital, which in that instance was a public charitable hospital.

Now, please remember that the term "agents" includes physicians, nurses, or attendants, in fact, any one associated with the care of the sick. The courts are just and if they are going to hold hospitals liable it follows automatically that the hospitals must be given the privilege of discriminating in the selection of their staff members.

Rather than dwell upon the legal phase, however, I would prefer to emphasize the great moral responsibility which hospitals assume as soon as they open their doors to admit the sick. There is a community trust and a tremendous obligation that hospitals have, which most of them have been living up to for years without reference to any court decision, for they realize that as hospitals they must protect the sick. The trustees cannot be expected to be medically trained and they cannot be expected to watch everything in the hospital, but they must exercise due and reasonable care as to whom they select for this purpose. If they do this the hospital is safeguarded to a great degree. Is the trustee or surgeon more liable? Of course both of them are liable, but that liability is not shared; it is not divided; it is a distinct and separate liability which each possesses. For example, we can think of certain instances in which a disastrous result might occur in a hospital where the surgeon alone was liable. In other cases a result might be ascribed to the hospital and the surgeon be absolved, and in still other cases both the surgeon and the hospital might be held liable, all depending on the exact circumstances governing each case.

The fact remains, we cannot dodge the issue. The courts have held the Board of Trustees liable for the results, no matter what type of patient, if it is proved that they have not exercised the requisite degree of care in their selection of staff members. Therefore, it behooves trustees of hospitals to be extremely careful in the selection of all individuals associated with the care of the sick and to watchfully observe the hospital's results.

CHAIRMAN GILMORE: Has any one anything to add? This is a very important subject. Perhaps some of you have had some experience. Just a word or two from any one.

DR. BARNARD (Lyons): I would like to ask if it makes any difference in a municipal hospital if a man, not a member of the staff, is allowed to operate, and whether the hospital assumes the responsibility for anything which might be regarded as illegal.

FREDERICK W. SLOBE, M.D.: Yes, because if that physician is given hospital privileges he becomes one of its agents, for whose acts the hospital is liable.

CHAIRMAN GILMORE: Is there anything else? If not, we will go to the next. Mr. Charles S. Pitcher, of Philadelphia, Superintendent of the Presbyterian Hospital, was to be here and discuss the next subject, *Doctors' Orders*, but he wrote that he found it would be impossible for him to come, and he sent his paper in advance. I will read it.

"'There are many loose methods in hospitals of leaving doctors' orders. I would like to know the best method to secure accuracy and reduce to a minimum any possibility of omission in the carrying out thereof.'

"In speaking to this subject, I will not go into details of what may happen if the orders of the physicians are not carried out, but will discuss how we may be assured that the physicians' orders are carried out and if the orders are not carried out, how we may know whose fault it is. There should be no order books nor slips. All orders should be written on the order sheets of the patient's chart. During the daytime no verbal order should be recognized. Only orders written in ink on the order sheets of the patient's chart should be carried out. At night, verbal orders, if necessary, should only be given to the night superintendent of nurses, who should write these orders on a memorandum sheet and attach it to the patient's chart. When the doctor visits the patient the next day, he should copy this order in ink on the order sheet. There should be two order sheets: (a) standing orders; (b) special orders. Only orders written on these sheets should be recognized. No pupil nurse should be allowed, at any time, to carry out a verbal order. Should she carry one out she should be punished. The method described above fixes the responsibility between the doctor and the nurse. If the doctor states that he has left an order which has not been carried out, the chart shows whether the doctor is mistaken or not. If the nurse states the doctor has given no order, the chart shows if the nurse is in error. If the wrong procedure has been followed, the chart shows whose fault it is. If the doctor crosses off a standing order accidentally and later on complains that his orders are not being carried out, the chart shows this fact. If a patient should have received certain treatment and it is not given, the chart shows whether the treatment has been ordered or not. In matters of this kind,

which may mean the patient's life or death, no temporizing can be allowed—the order was either given or it was not given. If the order is not on the order sheet it is prima facie evidence that it was not given."

CHAIRMAN GILMORE: I think that sums up the matter very clearly.

W. P. MORRILL, M.D. (Shreveport, Louisiana): I have found in two or three different hospitals insurmountable difficulties, and I have what I consider a more satisfactory system in that we use an order book in which every order is written by the nurse on the doctor's dictation, and initialed by the doctor. We have many doctors who give very involved orders. They are easily misunderstood by the nurse, but if the nurse writes them herself at his dictation she becomes responsible for reading his writing or her own in this case, and for a proper interpretation of the order. When he initials it he becomes responsible for the order as she has written it. The carrying out from then on is a matter of nursing administration which can easily be arranged by the nurses, but surely no system in which the doctor writes his own orders is safe, because the nurse always has the excuse (and doctors are proverbially bad penmen) that she could not read his writing or did not understand what he meant.

D. W. SHUMAKER, M.D. (Dover, Ohio): I heartily approve the idea of not writing orders on slips. I have had several little unfortunate experiences. Somehow the slip got lost and I insist now on writing my orders in chronologic order or have the nurse write them and I initial them; then if there is a sheet lost it is self-evident.

MR. S. G. DAVIDSON (Butterworth Hospital, Grand Rapids, Michigan): I want to support Dr. Morrill's statement about the orders being written on the charts.

As a practical illustration, a doctor comes in and writes his order on the chart of the patient, and there are fifteen, twenty, or twenty-five charts on the floor. It is the easiest thing in the world for a nurse to look through all the charts and overlook an order that has been written, and the chances are multiplied by the number of patients on the floor.

Very often a doctor comes in, writes his order and goes out without seeing a nurse. This makes it necessary that every little while the nurse must go through her charts on the floor to see whether orders have been written in the last hour or half hour. A book is by far the best thing.

M. T. MACEACHERN, M.D.: I want to say a word on this, as I am interested in it. I will tell you of a method that is accurate and economical. I have tried it for a number of years. It is simply a bound book with seventy-five to one hundred pages. The white sheet is divided into four divisions, perforated, to make up four prescription blanks. The carbon sheet is definitely bound in the book for a permanent record. Probably ninety per cent of the doctors' orders will have to go to the pharmacy to be filled. The doctor writes in the name of the patient, the ward and date, together with the contents of the prescription or the order. After duly signing it, the nurse sends it to the pharmacy where the order is filled, and then placed on the permanent file, as a record in that department. The nurse has a duplicate copy on the carbon sheet retained in the ward. From this she can copy out an order, check it off, or transfer it. This copy of the doctor's orders is very important when called into court. I doubt if the record transferred by the nurse in her own hand writing would hold in court. When you are through with the book you can file it away with your records and keep the carbon copy as a permanent record. Every order should be recorded, even if only for an ice-bag or a hot water bottle. Sometimes you will have the original and the carbon copy both on hand. There is no objection to this. Such a method will avoid the extra work of writing the prescription over again and thus save the nurse's time. It will also help to prevent mistakes in transferring orders. It is, therefore, most desirable from the standpoint of convenience, economy, accuracy, and possibly in case of legal involvement.

CHAIRMAN GILMORE: We must proceed to the next subject. I see Dr. F. H. McMechan of Avon Lake, Ohio, Secretary-General of Anæsthetists of America, is not here, so we will go to the following subject and come back to Dr. McMechan's subject later.

Routine for Pre-operative Cases. A superintendent writes: (a) "We insist that all patients for operation be in the hospital at least the night before. Is this generally done and is it necessary in all cases? (b) Should a preoperative examination be made on all, and of what should it consist? (c) In cases of tonsils, should nose and throat swabs be taken for bacteriological examination? (d) Should postoperative tonsil cases be allowed to go home the day of the operation?"

This has been divided into two parts. The first one was to be discussed by Dr. Cleon A. Nafe of Indianapolis, Superintendent, City Hospital. He is unable to be here. Dr. F. L. Koch of the Northwestern University Medical School, Chicago, will discuss Dr. Nafe's part of the question.

F. L. Koch, M.D. (Chicago, Ill.): In determining what should be done in preparing the patient for operation there is one thing we must always think of and that is the safety of the patient. Our idea is not to produce a record that would even pass muster with the American College of Surgeons, not to produce a record that has five white sheets, a yellow sheet, a blue and a purple sheet, but to do everything that will make that operation as safe as it is humanly possible to do so.

When is an operation safe for a patient? We ask ourselves four things: The first, is the patient free from infection? That presupposes a careful examination of the nose, throat, mouth, teeth, of every possible source of latent infection, because latent infection which shows little evidence except to the trained observer may, under a condition of lowered resistance, break out into a flame that will prove serious to that patient. So, is he free from infection, and if an operation is done to combat infection, to give relief to an infection already present, has that been controlled to the utmost extent? Has everything possible been done to localize that infection, so that when the patient is operated on that infection will not spread like wildfire and give rise to disastrous results?

In the second place, is he taking food and is he taking fluid? Every one of you know the harmful possibility, the disastrous effect of operating on a patient that is losing weight, going down hill. Is the patient taking food? It may be necessary to keep him in the hospital for a few days and try him out on a diet to estimate very carefully the caloric intake for several days, to assure yourself he is taking food. One concrete example you all know. A baby with a cleft palate, unless gaining in weight, is a serious risk. If the patient is in such a condition that the tissues won't assimilate food, any new wound you make in his mouth or any other place in the body has a slim chance of healing. It may be necessary to have the patient in the hospital long enough to assure you he is taking thirty-five hundred c.c.'s of fluid every day.

In the third place, is he eliminating properly? That presupposes a careful urine examination. It may presuppose a phthalein examination. The amount of fluid eliminated may not be sufficient or the percentage of solids may not be sufficient. Does his phthalein test (I grant you his phthalein test is a rough test but a direct indicative of what is going on) show he has eliminated as much as he should? Perhaps good chemistry tests are necessary, or an estimation of his urea excretion or his total nitrogen secretion is necessary. We want to know whether he is eliminating the toxic substances which will cause trouble if they are not eliminated.

In the fourth place, is he in a proper psychological state of mind? That may sound foolish, but the more we see of Christian Science, of Coué and of all the cults before the public today, the more we realize that the psychological condition of the patient is a real vitally important matter. Has the patient been in the hospital long enough to become acquainted, to feel the atmosphere of the nurses, the doctors, to feel the confidence in the people around him that he should? Is he in the proper psychological state of mind? Is he used to the noise and turmoil of the busy city hospital after a quiet country life? That may depend on the constitution of the patient. Some would be better off if they could be in the hospital two or three days beforehand and get themselves adjusted. Some other patients perhaps would worry just that much more and be in a worse condition as far as that phase of it is concerned, but we believe that the psychological state of a patient is an important thing.

A sister of a patient recently came to us. She said, "My sister made a remarkable recovery, didn't she? She had a serious operation, and got along wonderfully well." We said, "Yes, she did make a nice recovery, a smoother recovery than most patients." She said, "Do you know why that was? She had absent treatment." There is a lot of truth in that. She was getting absent treatment and knew she was getting it, and because she knew she was getting it she was in a psychological state of mind that helped her whole recovery.

As surgeons we have come to believe that we must look at the patient as a whole. The patient comes to us with ulcer of the stomach. Our surgical judgment dictates that it should be excised. Is the patient in a condition to stand the operation? We have to look into the stomach; we can't look at the ulcer. We must focus our attention on that, and look at the patient from every angle, from every conceivable angle, make the operation as safe as we can for the patient.

Chairman Gilmore: The other part of this question will be discussed by Dr. Charles S. Bookwalter of Chicago, Associate Professor, Northwestern University School of Medicine, Otologist, Wesley Memorial Hospital.

Charles S. Bookwalter, M.D. (Chicago, Illinois): Mr. Chairman, Ladies and Gentlemen: In answering the question, should nose and throat swabs be taken for bacteriological examinations in a tonsil case, I should say no, if this means as a

hospital for tonsil and adenoid operation, or tonsil operation alone, comes in the day of operation and the patient should then be examined for any evidence of acute infection or inflammation in the nose and throat, and particularly the chest. If there is any such evidence, he should not be operated on. His temperature should be taken. If the examination of the nose, throat, chest and heart, which should also be made, is negative, I can't see what advantage you would have in taking a swab of the nose and throat for bacteriological examination. Of course, it is a different matter when you want to make a culture to find out whether diphtheria is present or not. If there is anything about the case that makes you think it is necessary, however, I believe it is all right to do so. It is difficult to make any accurate determination of the presence or absence of bacteria from a direct smear, so I should say, since the information you would derive from examining a smear of the nose and throat, during the short time the patient will be in the hospital, would not be accurate, it is really useless to adopt it as a routine procedure.

The next question states, should post-operative tonsil cases be allowed to go home the day of the operation? I should say no, they should not. In my own operating, if the patients will not stay in the hospital at least twenty-four hours after the operation I won't operate on them. The main thing is hemorrhage. You should not permit a tonsil case to leave the operating room as long as there is any appreciable hemorrhage. Even though you have taken that precaution and the patient is not bleeding on leaving the operating room, the hemorrhage may take place within twenty-four hours or later, but certainly may in the first twenty-four hours. Usually the hemorrhage you have after a tonsil operation is not serious, but it might become very serious if you were not there to stop it.

About one experience in trying to stop a hemorrhage in somebody's house with the parents there and no assistance of any kind is enough, I should think. You will want to have the patient in a place where the parents and relatives can be taken into another room and where you will have nurses and internes to help you and drugs at your disposal, if required, and where, if necessary, you can take the patient back to the operating room. So I should say on account of the real danger of post-operative hemorrhage, all patients having tonsil operations should stay in the hospital at least twenty-four hours after the operation.

W. P. Morrill, M.D.: The most debatable part of the whole question has slipped between these two gentlemen, that is, should the nose and throat case come into the hospital the day before the operation? That was not covered by either one, and my own experience—five nose and throat men on the staff agreeing it should, and four privately agreeing it should not—leads me to say that it is the most debatable of all questions.

Charles S. Bookwalter, M.D.: I was not asked that question, but I could give my views on it. It has not been very long since the tonsil and adenoid operations were considered trifling things that could be done in an office, and many of these operations are now being done in offices and the patients go right home. You must be tactful. You are apt to meet with objections if you tell the parents of a child that it must be in the hospital the day before. It causes a great disturbance in the home; the mother has to stay with the child, etc., so it becomes more of a practical question than one of just doing the ideal thing. I think that probably it would be better in many cases if the patient were in the hospital the day before, and if there is any particular reason for it, you should insist on this being done. However, to adopt it as a routine measure, making all nose and throat cases come to the hospital the day before, is not practicable. The patient should be examined shortly before the time of operation.

J. A. Merriman, M.D. (Indianapolis, Indiana): It is not so much what is practicable as what is best for the patients. Hospitals are for the cure of our patients. I believe the patients should be in the hospital at least twelve hours before operation. They should be there the night before. The modern method of doing a tonsil operation makes it important that most of these persons take an anæsthetic. It is not fair to the hospital or operator, nor to surgery, Mr. Chairman, to have these patients come into the hospital and in twenty minutes or thirty minutes, give them an anæsthetic and do any sort of an operation, whether tonsil or not. We need propaganda on this just as we did need the propaganda concerning anæsthesia. There was a time when we couldn't get any one to take it. The family doctor's propaganda upset that. Let's upset the belief that a tonsil operation should be done haphazardly. Twelve hours is long enough if the laboratory service is correct. Of course, if there is no laboratory service at night then they can stay over night. I have in mind that the child should be there long enough to be investigated, and if twelve hours is not long enough, make it longer.

Dr. Sweets (Minneapolis, Minnesota): We had a rule first that these children should be brought

in the night before. That is not right. It is not right, as Dr. Bookwalter says, because the mother has to stay with it. We made it a rule that the patient comes in in its mother's arms at eight o'clock in the morning, and is operated on at eleven. Our laboratories are working in the morning and we know all about the patient by eleven o'clock. It is a pity that homes should be upset in that way.

CHARLES S. BOOKWALTER, M.D.: Many of these examinations can be done outside of the hospital as far as that is concerned. We have in our office a technician who can make those examinations the day before, if we want them.

M. T. MACEACHERN, M.D.: It is a good idea to have the patient in the night before.

CHARLES S. BOOKWALTER, M.D.: Not a child, to have it cry all night on account of being away from home.

CHAIRMAN GILMORE: That has been thoroughly discussed. Dr. E. Sommer of Portland, Oregon, is here and has to get away. He is at the end of the program, but we will advance him, and he will talk to us about *Difficulties with Interne Service*. "In our hospital we engaged two internes for a year. After two months one of them secured another position with more money attached thereto and left. One month later the other did likewise. We then had to carry on without any. What can be done to prevent this?"

ERNST A. SOMMER, M.D.: This is a very interesting problem and we can easily visualize the great many hospitals of all the way from fifty to four hundred beds that are in the same predicament.

You take a hospital which has a perfectly equipped laboratory and a perfectly equipped X-ray plant. It may have a full-time pathologist, a full-time radiologist and a capacity in the neighborhood of four hundred beds. The records may be kept properly and be of the type that are passed by the College. I am here to defend the interne in this case. But if the fellow does nothing of importance, and has a nice room and a pittance of forty or fifty dollars a month, and some other hospital whose exchequer is better built gets him, it ought to be welcome to him, for he is no good to the hospital unless they have a proper teaching staff.

The political situation between our universities and our hospitals is not the best in the world. When one of our large foundations in the United States investigated the colleges they became convinced, and they said that the conditions in the hospitals in the United States were so chaotic it would take fifteen years before the hospital problem would be anywhere near where the universities are, so we will have to wait fifteen years, according to this eminent foundation, until we get anywhere with the internes.

That problem I think has been answered by the University of Winnipeg. The University of Winnipeg has given the General Hospital, Vancouver, B. C., a quota of internes. They have appointed an associate professor in this hospital and he is responsible to the university for the proper training of their internes, and if they do not train them properly they will get none next year. That is the only solution I can see for the problem. You cannot expect these young men to come out after four years and be deprived of everything in the hospital. We find today nurses giving anæsthetics and surgeons taking in their own assistants, and almost everything else that the young man had twenty years ago has been taken away. If we want internes we must give them something in return. With present conditions as I have cited, we will have no internes.

The only thing I can see is for hospitals to become affiliated with these institutions of learning and before we are going to get very far in that direction we must have the full-time professors of these universities. There are five or six men on the faculty who are doctors, and the balance high-grade professors who don't know a thing about the clinical side. That is the predicament we are in when these foundations go around and survey our institutions and hospitals and put us on the list, or when we cannot come up to it, put us on the black list.

CHAIRMAN GILMORE: Who else?

ERNEST L. HUNT, M.D. (Worcester, Massachusetts): There is one little point about the interne which I think has not been taken up.

It is easy to get internes for the first half of the year, that is from June to December. It is rather difficult to get them for the other half of the year. Our institution has a rotating service; we take on and graduate an interne every six weeks.

It seems to me that should be taken up by the medical schools and the medical schools should graduate their students in January rather than in June, or each school should graduate two classes a year. It would be of advantage to the student himself to have two classes a year, for if he were getting into his medicine a little late in life he could perhaps get out of the medical school in three and a half years.

CHAIRMAN GILMORE: Is Dr. McMechan here? Dr. McMechan is unable to be present. There is a congress of anæsthetists in the city at this time.

I was hoping he would be here to discuss *Anæsthesia in Hospitals*. The question is "We are anxious to improve anæsthesia in our hospital. Up to the present we have not had a regularly appointed anæsthetist. Anæsthesia has been administered by the various attending physicians. (a) What are the essentials for an efficient anæsthetist service in a hospital? (b) Should a hospital have an anæsthetic department?"

Who can talk to us about anæsthesia?

J. A. MERRIMAN, M.D. (Indianapolis, Indiana): There should not be much need for discussion on these questions. The answers are self-evident, and I presume the reason they were asked is because those who asked them were unable to meet the requirements. It seems to me that the time has long gone by when any one except a trained anæsthetist should give an anæsthetic for an important case. There are many cases, to be sure, where the nurse may give the anæsthetic. There are many other cases where the family doctor may give it, but there are many other cases where no one should give an anæsthetic except someone who is trained in that business. There are cases where no one should attempt to operate without such service. The cleft palate needs and should have a trained anæsthetist; exophthalmic goiter should have one. It is not a question as to whether the patient should have one, however, but of requiring that the hospitals provide trained anæsthetists. Many of them do have them. Many of them have an anæsthetic department. They pay their anæsthetists. They build up this department until such hospitals have an advantage over those that do not have an anæsthetic department. The hospital with a well-organized department attracts the surgeon and the patient. I think there is no question but that the department of anæsthetics should be regarded as one of the essential features of a well-regulated hospital.

B. C. WILLIS, M.D. (Rocky Mount, North Carolina): We have a seventy bed hospital in our little town and we use our operating superintendent as an anæsthetist. We see no reason why we cannot combine the two very efficiently. This young lady has given anæsthetics in some two thousand cases; we have never attributed a death to her administration of it. She is very efficient, and I think for the small hospital that is the solution of the problem. Combine the jobs of operating superintendent and anæsthetist.

JOHN S. MCCONNELL, M.D. (Philadelphia, Pennsylvania): Under a full-time anæsthetist our internes are compelled to take a course.

CHAIRMAN GILMORE: There can be no question but that, where a hospital can afford to employ a full-time anæsthetist, it is very desirable to do so and have the internes taught by the anæsthetist. Hospitals are growing in that respect if in no other, and the time will soon be here when every hospital that can afford it will have a paid anæsthetist on full-time, responsible for all anæsthetics given.

The next subject is *Appraising of Hospital Records*. "I am in doubt generally as to the real quality of our hospital records. Is there any practical way of appraising or rating them?"

Dr. W. R. Cubbins of Chicago, was to discuss this subject, but he is having a clinic at this time and won't be able to be with us. Dr. Thew Wright of Buffalo will take his place, and I would like to hear from Dr. Wright now.

THEW WRIGHT, M.D. (Buffalo, New York): I feel somewhat as I would if someone should come to visit me and I started out to show them Niagara Falls and found they were shut off and then I told them we had a squirt gun around the corner.

I expected to hear something from Dr. Cubbins in reply to this question. I don't know as I have any practical solution which would cover the appraising of hospital records. There is no question but that the general quality—in spite of what the American College of Surgeons has done—of the hospital records in many instances is just about so much paper. There has been a vast improvement since the days when I was an interne, when I was much more anxious for the actual care of the patients than for getting anything down that would be valuable either in a legal sense or to posterity. I remember one instance keenly. For some weeks after I made a complete history we hunted for it and could not find it. A superintendent happened to break open a new file case and found my very valuable record which was not even initialed. Sam Smith's family history was negative and his present history was that he fell off a hay wagon and broke his leg. That was all that was necessary for I had to take care of it, and he got well, but it brought out the facts. Since then I have learned better.

The value of the hospital records should be looked at from several points. I had to take this matter to our own Board of Trustees to get enough money to support a proper record room. First, from the medico-legal point of view, it is necessary to have an accurate report from the hospital. Second, there is the value of our records as a contribution to medical science. Any organization must have a record of its business; it is either good or not good, but there is some record to be given to the stockholders so they may know the quality of work being done. From the medical

point of view there is the importance of our hospital records; having a record of the case as to what was done, what was the result and who was responsible, if possible, for the result.

In order to improve the records in that way and appraise them properly from that point of view, it is absolutely essential that the attending physician or surgeon sees to it that the medical part of the record is accurate, that the progress notes are down and that he puts himself down in black and white and signs it.

There is great objection to that frequently. Doctors say they are too busy to write records themselves and sign them. There is a great deal of truth in that, and if I tried to write all the records myself it would be useless or worse than useless, for nobody else could read them. But the attending physician can, through some one of his assistants, get the essentials on the record sheet and read them and sign them. That is going to improve the quality right away, for if you have to put your name to the bottom of the record, you are assuming a serious responsibility. I would say that an essential thing, perhaps the most essential thing, in appraising the value of hospital records, is first and foremost to have the responsible man for every part of that record sign his name.

Ernest L. Hunt, M.D. (Worcester, Massachusetts): It seems to me that this question was fairly covered this morning in that able paper of Miss Morris'.

Following Miss Morris' talk, somebody made the suggestion that possibly the College was doing all it could. Something flashed before my mind, one illustration of proper record keeping. I remember in another hospital upon occasion when I visited it, charts were being discussed. The surgeon was there, and he said, "Just to show you my charts are always up to date and are valuable I will go out and pick out four, any four." He went out and brought them back. Here was his statement. He looked at one chart and he said, "My gracious! What do you know about that? That interne has not put a single progress record down for months."

Chairman Gilmore: I know of a hospital where the superintendent got together all of the records and used them in the furnace. Afterwards when anybody wrote in regarding any one of those patients, the answer was, "I am sorry, but this record was destroyed by fire."

My idea is that many of the records written years ago would be improved by that treatment. The records we are getting nowadays are far better, and when the doctor considers that he is liable at any time to be brought into court and that his responsibility may be determined by that record, it would seem to me that he would make it his business not to let it go thirty days and only find it out by chance, but see to it that his records are kept as they should be.

Just as a suggestion, and every hospital can do this, large or small. A committee should be appointed whose duty it is to look over the records and see that they are all kept up. If the hospital can have a paid statistician, that is better, but where that is not possible, surely somebody in the hospital ought to have interest enough in it to look over the records to see that they are properly made.

Chairman Gilmore: *System of Nomenclature.* We are fortunate in having Mr. Asa Bacon, superintendent of the Presbyterian Hospital, Chicago, and President of the American Hospital Association, with us today. The American Hospital Association meets next week and Mr. Bacon is a very busy man. It is a great courtesy on his part to be here today to talk to us regarding a system of nomenclature.

Mr. Asa Bacon: When Mr. Gilmore wrote me to come and say a few words this afternoon he asked me to speak on the subject as follows: "We are having difficulty in our record department in selecting a system of nomenclature to suit us. What system or systems are available and commendable?"

I will not review the history of medical nomenclature, for you no doubt know more about it than I. Webster defines "nomenclature" as "the technical names used in any particular branch of science, or art, or by any school or individual." In a manual issued by the Bureau of Census, Washington, the introductory notes are as follows:

"The progress of what is known as the International Classification of Diseases and Causes of Death is most remarkable. It can be explained only by the fact that there was a widely recognized need for national and international uniformity of classification, and that the system proposed met fairly well the demands of registration offices and of the users of mortality statistics and proved capable of progressive development as those demands changed with the advance of medical knowledge.

"As late as 1893 no two countries in the world employed precisely the same forms and methods for the statistical classification of causes of death, the compilation of which is universally regarded as of the utmost importance for the advancement of sanitary science and practice. This lack of uniformity rendered the statistical results of such

classification incomparable, and it was imperative that an effort be made to remedy this defect."

A common approved classification is what we need and so far as we have studied the situation the International Nomenclature, as approved by the American Medical Association, is the one that should receive our consideration. I expect the trustees of the American Hospital Association to adopt it as a standard for hospitals, inasmuch as in 1922 they passed a resolution authorizing the executive secretary to enter into correspondence with the American Public Health Association, the American Medical Association, and other national organizations on the subject of Standardized Medical Nomenclature.

In September, 1923, the executive secretary referred the correspondence collected to the trustees, who again went into the subject and referred the question of "International Nomenclature" to the committee on records.

What we should do is to adopt a nomenclature that the three organizations, the American Hospital Association, the American Medical Association and the American College of Surgeons, can get back of as our standard, regardless of what it is today, and change it from time to time as medical knowledge advances. I believe the International, which has been accepted by most of the countries of the world, is the one we should adopt. I will be pleased to answer any questions.

CHAIRMAN GILMORE: Has anybody any questions?

W. H. CONLEY, M.D. (New York): I have been very much interested for a great many years in a standard nomenclature. In fact, in New York, in the hospital department of public welfare, I put in the International Nomenclature. We had a medical statistician appointed and she insisted on using the Bellevue. I said the Bellevue Nomenclature was not complete. We have since found out it is not complete.

A committee on records of the department has been appointed, and that committee every month when they have a meeting is adding more and more names to the nomenclature. I believe that it is time that the American College of Surgeons, the American Medical Association, and the American Hospital Association got together and adopted the International Nomenclature for this reason: It is the standard of the world. The countries of the world have adopted the International as the standard. If one hospital uses the Bellevue or a system of their own, and another uses the International, the records are incomparable. I believe hospitals should have the same records, the same nomenclature, all over the country, in fact, all over the world, so we can compare the records of the different hospitals and if we don't use the same system we cannot make them comparable.

CHAIRMAN GILMORE: Anybody else? You notice the two pronunciations of the word "nomenclature"? I can't say the first one very well. I looked it up and found either one is correct, so don't feel bad if someone else says it differently.

Recording of Infections is the next subject to be discussed. One superintendent writes: "I find that post-operative infections are frequently omitted in patients' records. I should like to know an immediate and accurate method of recording all post-operative infections and complications."

Dr. George Stephens of Winnipeg, Manitoba, Superintendent of the Winnipeg General Hospital, will talk to us on this subject.

GEORGE STEPHENS, M.D.: In answering this question I can only put forward the method I have in my institution and you can see whether or not it will be of any help to you.

There is no claim for originality in it; it is not put out with any idea of obtaining comparative statistics or as a spying method, but because the hospital feels it must know what is going on. We have a form, just a cheap bit of paper, containing the name, number, ward, nature of operation, date, surgeon, first assistant, instrument nurse, sponge nurse, date of first dressing, dressing doctor, dressing nurse, date of appearance of infection, location and character of infection. There might be another item added about the swabs. Swabs are taken as a routine so this does not matter. This form is used in every case of a closed wound that for any reason whatsoever breaks open, whether a small abscess or something larger. In every case this report is made out. By whom is it made out? It is made out by the supervising nurse on the floor, in triplicate, and sent in without reference to anybody concerned with the case. To whom does it go? One copy goes to the superintendent of nurses and one to the supervisor of the operating rooms, so she may check back on her record of that particular operation. She has the operating book, a copy of the operating sheet, and all the details. The third copy goes to my office. (The form is shown on following page.)

What is done with it? My resident or I take this case up directly with the operating surgeon. It is not left to the supervisor's judgment to say that this is an infection; it is not rated that way until the question is gone into thoroughly. She merely puts down the break in the wound. I then take it up with the operating surgeon. It

WINNIPEG GENERAL HOSPITAL

INFECTION REPORT

Name
Number
Ward .....
Operation, Nature of .....
Date .....
Surgeon
First Assistant .....
Instrument Nurse .....
Sponge Nurse .....
Date of First Dressing .....
Dressing Doctor
Dressing Nurse .....
Date of Appearance of Infection .....
Location and Character of Infection .....
Supervisor .....

may be one of those cases of an acute appendix where he took a chance and closed it up. It may have been an old chronic pelvic inflammatory condition which was infected from the start. It is discussed with the operating surgeon and if it is not capable of ready explanation, it may be in some cases referred to the surgical staff, for the committee of the surgical staff to form their opinion on the matter. It is then sent to the record room and there recorded as an infection. If recorded as an infection it is noted by the records room on the history sheet, in case the surgeon may have forgotten to put it down.

The other types of infection are harder to deal with—those in which the wound is not involved. We get that by another method. That is it comes down in the ward reports. Any post-operative case running a temperature of any considerable extent, a case of abdominal symptoms, and numerous other things that occur to you, are all taken up directly with the surgeon in charge of the case.

As I said, this is not a spying method, but we have gone through a good deal in past years, ladies and gentlemen, and this thing is vital in a hospital of about six hundred beds, two thirds closed staff, one-third open, being the private service, with fifty different men attending and the interne service covering the general or public ward section.

CHAIRMAN GILMORE: Dr. Stephens' hospital is known all over the continent as a hospital that gives a special attention to the recording and care of any infection which may arise. We are fortunate in having him with us this afternoon. Of course, infection is liable to terminate in death and anything that can be done to keep that at a minimum should be done. Let us have a discussion on this interesting and vital question, the recording of infections.

DR. MATTHEWS (Philadelphia): We have a simple method for recording infections and I thought you might be interested in it. As soon as the patient's wound has been cleaned and swabbed three times, the dressing room nurse puts a red star on that patient's chart. If it is a wound complication, an orange star, if pulmonary, a green star. That goes into the ward so that any attending surgeon or any member coming into the ward can immediately see the number of cases of complication they have on hand.

Instead of having only a monthly staff conference of the surgical division, we have a weekly conference, which takes up the cases discharged the previous week. We have these every Wednesday afternoon at four o'clock. The history of every patient discharged since the last Wednesday is analyzed. The patient's history is passed around. The name, operation, diagnosis, number of days in the hospital, whether the result was improved, and whether they had a wound complication is recorded. We have the chief anaesthetist and chief of the operating room at the meeting, so the pulmonary complications are discussed from the standpoint of anaesthesia, and the wound complications from the standpoint of operating technique.

CHAIRMAN GILMORE: If there is no more discussion on this topic, we will go to the next subject, *The Ratio of Internes and Nurses to Patients*. This superintendent writes, "I should like to know the average ratio of internes and nurses to patients in a general hospital. We have an institution of one hundred beds with sixty used for public and forty for private patients. (a) How many internes and nurses should we have? (b) How many internes will such a hospital require and afford them satisfactory experience?"

Mr. S. G. Davidson, of Grand Rapids, Michigan, Superintendent of the Butterworth Hospital, has been asked to lead this discussion.

S. G. DAVIDSON: This is one of those very difficult questions to answer. Supposing that the hospital is a general hospital caring for all kinds of work, I believe that the best authorities are agreed that for day service in private rooms there should be one nurse for every three patients, which would in this one hundred bed hospital give us thirteen nurses for the day service. It is said that there should be one nurse for every five

patients in the ward, which would give us in this hospital twelve, or a total of twenty-five nurses on day duty. The authorities, also, I believe, from careful study of this matter, state that for night service there should be one nurse for every seven private room patients, which would make five, and one nurse for every fourteen ward patients, which would be three, or a total of eight, making a total of at least thirty-three nurses on duty. Supposing there were two in the operating room; with a fairly active service there should be six nurses. For out-patient work and for district and public health nursing, there should be at least two more. For the dietary department there should be at least two; for affiliated courses, contagion and mental, there should be not less than two, and for the other services such as pharmacy, X-ray laboratory, etc., I believe the hospital ought to have at least two more, which would give a total of forty-seven nurses in active service. With the three-year course there would be graduated each year approximately sixteen nurses.

If the school takes in a class in the spring and a class in the fall it would mean that there are at least eight girls coming in twice a year, and that for the first six months of their service in the hospital they can be counted of very little use in caring for patients; therefore those probationists, if you wish to count them in the number of pupil nurses in your school, would give a total of fifty-eight. This is not taking into consideration sickness among the nurses nor does it leave much of a balance for nurses dropping out for one cause or another. In computing, this condition must be considered—the type of cases in the hospital. If there is no pediatric department or a very small medical department, it is necessary to affiliate additional nurses. You must also consider whether or not the buildings are compact, all the service being under one roof, or whether the buildings are scattered, in which event more nurses are needed. The size of the wards is a serious matter in considering this question, as is also the accessibility of the equipment, the number of operating rooms in use, the hours on duty, whether eight or twelve, the educational standards of the institution, whether the nurses have to do all their study work, attend all their lectures outside of their regular routine hours on service or whether they have special hours off for their work. All of these must be considered, and in the event of some conditions you only have to multiply or subtract from the number of nurses suggested here.

The matter of interne service must, too, depend on the character of the work and these other items such as accessibility, compactness of the hospital, etc. I do not believe I am in a position to answer the question fairly, and I think it is something that is worthy of a great deal of discussion.

At my own hospital, averaging about a hundred and five patients a day, we have four internes and a chief resident and they are busy all of the time. That service is divided, the chief resident doing some of the work with the surgeons, major surgery, and one interne on surgery, and ear, nose and throat work in the main building. We are unfortunate in having several other buildings. Another interne is assigned to medicine, X-ray and the out-patient department, a third to the laboratory, ambulance and accident department which happens to be heavy in this hospital, and the fourth man is assigned to obstetrics and ear, nose and throat work in the children's building.

The question of internes has been discussed here this afternoon, and to my mind the solution of that centered upon two points, one the interest taken in the interne in his practical teaching by staff members, and two, the amount of work that can be given him to do. No man can be happy if he is sitting around twiddling his thumbs, but the fellow who has just as much work as he can lay into twelve and fourteen hours a day is the one who will feel he is getting a good service out of his hospital experience; and in our hospital we find that the four men in addition to the chief resident are working all the time and are perfectly satisfied with that service.

CHAIRMAN GILMORE: It is evident that while it may be desirable to have a few doctors in a hospital, it is essential to have nurses. Who else will discuss this question? Some of you ladies must be particularly interested in the nursing question. What is your experience? How many nurses to the number of patients do you consider necessary? If there is no further discussion we will pass on to the next question.

Computing Hospital Death Rates. A superintendent writes, "I find a great variety of methods of computing hospital death rates. We should like to know (a) What is meant by and included in the term institutional death? (b) What is the correct method of calculating (1) net death rate? (2) gross death rate?"

Mr. C. J. Cummings of Tacoma, Washington, Superintendent of the Tacoma General Hospital, who is to discuss this, has come all the way from the Pacific Coast to be here. I think a superintendent who will do that is a real man. I am certainly glad he is here.

C. J. CUMMINGS: The idea of studying hospital deaths with a view to concise classification is new to me. The basis for discussion is

presented by our Round Table leader. The only basis for discussion of this subject which I can find is a classification of hospital deaths into non-institutional, meaning deaths occurring within forty-eight hours after admission, and institutional deaths, with an attempt to calculate a net death rate and a gross death rate.

My very first conclusion in studying this classification has been that it is going to be a matter of tremendous difficulty to arrive at any hard and fast lines of division into classes, because of the many factors concerned in the outcome of any given case. There will be little question in the minds of anybody as to the wisdom and justice of classifying the patient who arrives at the hospital dead, as a non-institutional death, nor will there be much difference of opinion about the classification of most patients dying shortly after admission, say within a few hours. There is still a third group such as exophthalmic goitre *in extremis;* the cancer of the stomach in the terminal stage; practically moribund cases of general peritonitis; all of these have, in fact, their death signed before they come to the hospital.

Certainly an institutional death should be defined as one which might have been prevented or in which the mortality risk might be reduced by the manifold facilities of hospital equipment or scientific skill of the attending physician or surgeon. In other words, the hospital does not want to bear the responsibilities or the odium of a death of a patient in which they have had no part in the treatment or management; but any case in which the hospital might in any way, no matter how slight the degree, do something, giving reasonable hope of increasing the chances of recovery, should be classed as an institutional death, because there is a responsibility here.

It at once becomes apparent that our great difficulty in classifying cases will come in the border line zone between the patient who is brought in dead and the average run of hospital cases where the present-day mortality runs one to ten or twenty per cent. Admittedly we cannot do anything in the hospital for the man that is dead on arrival or soon after, and equally without argument we will admit that our entire hospital activities are designed for the better and more efficient care of the average case. This, then, will throw our discussion into the zone of questionable classification.

Let us consider the crushing injury that enters the hospital in frightful shock. This man may go right down and die within six or certainly within forty-eight hours, unless the most advanced surgical skill is brought to bear on his case, and every possible hospital facility known in hospital equipment at the present day is brought to bear on this case. Is not the same true of fracture of the skull? Certainly both surgical skill and hospital equipment have a responsibility in this type of case, and even though they represent injuries that will almost invariably give us deaths within the first forty-eight hours, they should unquestionably be classified as institutional deaths. What about the infant mortality in congenital syphilis? Eclampsia death of the mother? Diabetic coma? An extra-uterine pregnancy? And poison cases? All of these types of emergency cases, in fact, stand in the position of the ultimate test of the efficiency of both hospital and surgeon, and may well serve as a basis for the classification of both hospital and doctor as excellent or mediocre.

Just in proportion as the surgeon knows precisely what to do in these cases and exactly in the degree that the hospital furnishes him with prompt and complete service will he or the hospital succeed in preserving the life of this sort of patient.

Now here comes another very important fact bearing upon the border line as well as the average case, namely, the number of physicians and surgeons on a staff, and the quality of their training. A closed surgical staff with six to twelve of the most highly trained, best equipped men in the community will certainly save more of the border line and handicapped patients than will a promiscuous open staff which includes any doctor holding a state license. This same sort of staff will unquestionably have fewer deaths and a lower morbidity.

I am fully cognizant of the fact that mortality is not the full test of operative skill or efficiency. Almost any doctor who is ordinarily clean, can with the aid and supervision of the modern hospital operating room and with a head nurse standing by him, get his patient out of the operating room and out of the hospital alive; but, unless the right thing has been well done, this patient will either be no better or worse for his operation. This question of morbidity is beside the subject, but has a tremendous importance.

I would therefore conclude: first—that there is a certain group of deaths for which a hospital is in no way responsible, and in which no amount of hospital perfection can change the fact; second—that there is a border line group of bad emergency cases, as mentioned above, in which only the greatest amount of honesty and fairness on the part of the surgeon and the hospital will properly place the responsibility; and, third—that in the vast majority of routine work which may be designated as deliberate medicine or deliberate surgery, the

responsibility is clearly shared by the hospital, and all deaths are institutional deaths.

CHAIRMAN GILMORE: That is an exceedingly interesting paper. Who will discuss the paper? Are there any hospital folks here?

W. H. CONLEY, M.D. (New York): In municipal hospitals we call them all institutional deaths. Many of the private hospitals transfer patients in good condition to city hospitals, particularly city cases in the so-called subsidized hospitals. It got so bad they passed a bill through the legislature stating that any patients dying within seventy-two hours after transfer from one hospital to another should be reported, but they paid no attention. The City of New York, under the charter, has to accept all cases sent to them; therefore, our records show the difference.

CHAIRMAN GILMORE: The next question is *Physiotherapy in Hospitals*. The superintendent writes, "We have a hospital of 250 beds and feel that a physiotherapy department would be of great advantage. (a) What economic and scientific advantage could such a department offer? (b) What would be a satisfactory lay-out? (c) What equipment would be needed, and what would be the cost? (d) How could a department of this kind be managed for best results?"

We have asked Dr. Charles E. Stewart of Battle Creek, Assistant Superintendent of the Battle Creek Sanitarium, to discuss this subject.

CHARLES E. STEWART, M.D.: I am fully aware that in the brief time at my disposal I shall not be able to answer satisfactorily all five questions relating to a physiotherapy department in a 250-bed hospital, since any one of them is of sufficient importance to warrant a much longer discussion.

(1) What economic and scientific advantages would such a department have? Physiotherapy makes a very strong appeal from the standpoint of economy, and affords but little ground for dispute to the contrary. This has been amply demonstrated in our military hospitals during and since the World War. Surgeons in these hospitals found that when physiotherapy was scientifically applied, the period of hospitalization and disability was in a very large percentage of their cases lessened from 25 to 30 per cent and in a number of instances as much as 50 per cent. Many times patients who would ordinarily be considered incurable have by the use of physiotherapy been rehabilitated to such an extent that they have been able to take up productive work.

While it has been the good fortune of the surgeons to observe the pronounced benefit resulting from the use of physiotherapy in many thousands of cases under their care during the war, it is safe to say that equally good results may be obtained in every department of medicine.

By physiotherapy we mean treatment applied by physical means such as heat, light and exercise, the object being to bring into play against the pathologic process the natural defenses of the organism; and I venture to make the statement that the scientific physiotherapist has at his command a variety of remedies which is not equaled by any other form of therapy, either from the standpoint of scientific application or from the beneficial results obtainable.

(2) and (4) What is a satisfactory lay-out and what equipment is needed? Practically every patient in the average general hospital may be benefited by one or more forms of physiotherapy during his period of hospitalization; consequently, in planning for a physiotherapy department, provision for space and equipment should be made accordingly.

In considering the question of space for such a department, room for expansion should be allowed; for if the department is in charge of a competent physiotherapist it is certain to grow, and additional space for equipment will soon be required. In the erection of new buildings allotment of space for the department can easily be made, but the problem of securing sufficient room in a building already erected is a more serious matter. Usually such hospitals are already overcrowded and it is extremely difficult to obtain the necessary space. However, if the trustees can be shown that by the introduction of a physiotherapy department the period of hospitalization can be substantially reduced, they will readily see that the giving up of sufficient space for the department will considerably increase the efficiency of the hospital, and they will no doubt act in accordance with the best interests of the institution by making provision for the proper housing of the department.

The physiotherapy department should be located in a part of the building where there is adequate light and good ventilation. Arrangement should also be made for the wiring necessary to furnish suitable current for the various electric appliances to be installed.

The hydrotherapy section should be equipped with three full baths, two of which should be six feet long. These can be used for the ordinary full or cleansing bath as well as for neutral, continuous, Nauheim, and hydro-electric baths. A wall plate equipped with a combined galvanic and sinusoidal outfit should be placed in close proximity to one of the tubs so that connections can be readily and quickly made. There should be two

sitz baths and two arm baths, six foot and six leg baths, and at least one of the leg and arm baths should have the whirlpool equipment. A combined shower, spray and douche apparatus is also an essential in every well-equipped hydrotherapy department.

An electric light cabinet is the most satisfactory means of applying general dry heat, being much superior to the Turkish bath. Provision should also be made for giving shampoos and salt rubs; the best arrangement is to have a well-heated room adjacent to the shower. A copper tank 30 inches square and 30 inches deep, connected with the water supply and so arranged that live steam can be turned into the water in the tank, will be found very useful in heating blankets for packs and fomentation cloths. The tank should be equipped with a large wringer. The department should have four treatment tables and the blankets, sheets and towels required to give the treatments prescribed.

A high frequency machine of known value, a static machine and sinusoidal, faradic and galvanic outfits are required for the electrical department. The hospital should also have facilities for X-ray and radium therapy.

Two sun parlors, one for men and one for women, needed in the light department can in some instances be placed on the roof. The means for giving ultraviolet and radiant heat should be provided in this department.

The mechanical department should be equipped to furnish active and passive massage, both manual and mechanical.

(3) For the cost of equipment, exclusive of the X-ray and radium equipment, the foregoing will cost approximately $4,000, and will serve as a nucleus to which other appliances can be added, as found practical to do so.

(5) How should the department be managed to secure the best results? The department ought always to be in charge of a physician who has a good fundamental knowledge of physics, physiology and pathology, and special training in the various branches of physiotherapy. Such a man will be able to train assistants competent to administer one or more forms of physiotherapy. The demand for such persons is growing so rapidly that it will probably not be long before satisfactory schools will be established in which the necessary training will be given.

When the attending physician decides that his patient would be benefited by some form of physiotherapy, a statement to that effect, accompanied by a diagnosis of the case, sent to the physician in charge of the physiotherapy department, will secure for his patient the form or forms of physiotherapy most suitable to the case.

CHAIRMAN GILMORE: Who is interested in physiotherapy?

DR. BALDENBERG (Chicago, Illinois): I want to say that I have waited here all afternoon especially for this paper. I want to endorse Dr. Stewart's statement in summing up that the department should be in charge of a competent physician, he having had special training in physiotherapy. Unfortunately at this date most hospitals employ physiotherapists or nurses to carry on the department. We must have the trained medical physiotherapist to direct the work.

I feel that my time has been well spent here if only to impress the superintendents of hospitals with the importance of having the physiotherapy department in charge of a competent physician, just as they are interested in having a competent surgeon on their staff.

CHAIRMAN GILMORE: This brings our session to a close. I appreciate more than I can tell you how splendidly you have all coöperated in making this Round Table a practical success. I hope all of you have benefited by the splendid discussions. You will see all this in print later.

(Mr. Gilmore made some announcements.)

(Meeting adjourned at four twenty-five o'clock.)

HOSPITAL STANDARDIZATION REPORT FOR 1923

Including List of 1181 General Hospitals of 50 or More Beds in the United States and Canada Which Meet the Minimum Standard of the College

THE American College of Surgeons has completed the sixth annual survey of hospitals in the United States and Canada. The results of this survey give evidence of steady progress toward hospital betterment and an increasing interest in the hospital standardization movement. Not only are the medical profession and the hospital people themselves vitally interested, but the public is developing a widespread belief in this effort for improved and highly efficient care of the sick.

Since the year 1918, when the American College of Surgeons first actively undertook the standardization of hospitals, there has gradually developed a new era in hospital service. This era is characterized by the development of more efficient institutions standing for the utilization of every means known to medical science for the best possible care of the patients. A definite standard has been established whereby hospitals may measure their efficiency in terms of service to the sick and end-results. The standard is now well beyond the experimental or trial stage. After six years of its application in large numbers of institutions on this continent, those charged with its promotion find no reason for altering any of the procedure laid down therein. This standard is based on a service so broad as to embrace the activities of every person who has anything whatsoever to do with the care of the patient—the hospital "perspective"—on whom the accumulative services of the institution must be focused. Every person in a hospital organization, no matter what their status may be, has a definite responsibility and share in the proper care of each individual patient and in the obtaining of the best possible result.

WHAT HOSPITAL STANDARDIZATION IS

Hospital standardization is an international movement including in its scope all general hospitals of fifty beds and over in the United States and Canada. It is carried on by the American College of Surgeons whose membership includes at present over 6000 surgeons in both countries as well as a number from South America. One of the outstanding features in the progressive program of the College is the movement for better hospital service, more widely known as hospital standardization. This movement, through the application of its inherent principles and by means of an annual survey, aims at establishing and maintaining in hospitals an organized personnel working as a group in the best interests of the patient. It demands that there be provided the necessary facilities for scientific diagnosis and treatment and that these facilities be utilized under competent direction. It requires that there be a careful and accurate recording of all data concerning each patient. This is necessary in order that there be a thorough study and investigation of each case to insure (a) an early, accurate, and comprehensive diagnosis, (b) the correct and effective treatment, (c) the best possible end-result. It is the desire of the College that, through the carrying out of this program, every individual requiring hospital treatment, regardless of race, color, creed, or social status, shall receive the benefits of the most up-to-date and scientific procedures known to modern medicine. This is a humanitarian service with the basic idea that our hospitals are conducted entirely for the benefit of the patient.

There is no desire to interfere with the individual initiative of any hospital. The standard set is the minimum requirement. Each institution is encouraged not only to reach that standard but go as far beyond it as possible. The requirements laid down are fundamental. They are the basic principles which are absolutely necessary to make the hospital a scientific institution, capable of rendering the best service to the patient, to the public, and to the profession.

The minimum standard sets forth certain clear cut and definite requirements which deal chiefly with the conduct of the hospital in the interest of the patient. These requirements may be briefly summarized as follows:

A. *The organization of the medical staff.* A hospital, meeting the minimum standard, must have a competent and ethical medical staff to which certain duties are assigned as follows: (a) the drawing up of rules and regulations governing the professional work of the hospital, (b) the supervision of the professional activities of the hospital in order that the highest degree of efficiency may be maintained, (c) the carrying out of staff conferences at regular periods, and (d) the rendering of every assistance possible to the administration or management in the development

and promotion of the professional work of the institution.

B. *The providing of case records.* In order to insure competent and satisfactory investigation and results in every case coming under treatment in a hospital, it is absolutely necessary that accurate records be provided. "A hospital without records is like a clock without hands, still running but providing no information to tell whether it is right or wrong." An accurate record is of inestimable value not only to the patient, the doctor, and the hospital, but also in the advancement of scientific medicine and research. Our hospitals owe to future generations records of present experiences. What we know of scientific medicine has largely been left to us by the masters of the past.

A physical accounting is required in every thoroughly competent hospital. Otherwise the institution is operating blindly without any definite realization as to its actual efficiency. This accounting can be carried out only when the findings, the facts, and conclusions on every case are properly recorded. Moreover, the record must have behind it the spirit of honesty and sincerity and be a filtration of scientific facts leading to a definite conclusion.

C. *The providing of diagnostic and therapeutic facilities.* In this regard special reference is made to the laboratory and X-ray services. Those departments, when efficiently organized and under competent direction, are of inestimable value, both in making a diagnosis and in carrying out treatment. The minimum standard does not only require that these facilities be available for the benefit of the patient in the hospital but that they be competently and scientifically utilized whenever required.

WHY HOSPITAL STANDARDIZATION COMMENCED

The American College of Surgeons was founded in 1913 with high ideals and certain professional requirements for Fellowship. Very early the surgeons found that their working environment in the hospitals was not in keeping with the ideals and objectives set forth by the College. Many hospitals at that time were lacking in a practical standard of efficiency. A careful consideration of the situation revealed the fact that the hospitals of the United States and Canada, generally speaking, lacked organization, satisfactory case records, and competent facilities to assist the doctors in carrying on their work. There was not satisfactory coöperation of the profession or the various groups working in the institution. Consultations were few and records incomplete. Any analysis or check-up of the work was lacking in most instances. Owing to these deficiencies candidates who were endeavoring to comply with the requirements for Fellowship in the College found it difficult, if not impossible, to provide satisfactory records of their cases. The College proceeded to gather information along definite lines with regard to the status of hospitals, and soon a large amount of valuable data was accumulated by means of correspondence with hospital officials, boards of trustees, and others, as well as by individual investigation on the part of College representatives. The information secured gave definite evidence of the existing hospital situation in the United States and Canada and was of great value to the College in formulating the program for better surgery.

The information collected was carefully considered and it was realized that there was a definite need for a sound and practical standard embodying certain fundamental principles which would provide the best possible hospital service, both from the standpoint of the patient and the physician. After careful deliberation the minimum standard was formulated—a standard which is minimum in name but maximum in effect, having a universal application and fitting all types of hospitals. This standard provides a fundamental service and procedure which any institution worthy of the name of hospital should accept. It is known as the minimum standard of the American College of Surgeons. This minimum standard is as follows:

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word "staff" is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are (a) full graduates of medicine in good standing and legally licensed to practice in their respective states or provinces; (b) competent in their respective fields and (c) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.

3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide: (a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.) (b) That the staff review and analyze at regular intervals the clinical experience in the various departments of the hospital, such as medicine, surgery, obstetrics, and other specialties; the clinical records of patients, free and pay, to be the basis for such review and analyses.

4. That accurate and complete records be written for all patients and filed in an accessible manner in the hospital, a complete case record being one which includes identification data; complaint; personal and family history; history of present illness; physical examination; special examinations, such as consultations, clinical laboratory, X-ray and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings.

5. That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis, and treatment of patients, these to include, at least (a) a clinical laboratory providing chemical, bacteriological, serological, and pathological services; (b) an X-ray department providing radiographic and fluoroscopic services.

THE PRESENTATION OF THE PROGRAM OF HOSPITAL STANDARDIZATION TO THE HOSPITALS

Through the medium of the hospital visitor, hospital conferences held in various parts of the United States and Canada and widespread correspondence, the foundation of hospital standardization has been laid and the superstructure is now being well developed. The program of the American College of Surgeons is presented annually to all general hospitals of fifty beds and over in the United States and Canada. This is not done by correspondence but by personal visits of carefully selected investigators. These men are sent out from headquarters to visit the hospital by appointment and carefully survey the institution. They report their findings according to a definite and prescribed form laid down by the College. When possible they meet the various groups in conference, explaining the workings of the program and discussing such matters as pertain to the improvement of the service. The visitor reports to headquarters and a follow-up is maintained. The procedure, therefore, is to analyze through personal investigation the general hospitals of 50 beds and over in the United States and Canada, in terms of the minimum standard of service.

WHAT THE MINIMUM STANDARD REQUIRES

The minimum standard of the American College of Surgeons presents the following principles as essential to its attainment.

1. The doctors practicing in the hospital shall be organized as a staff. This organization may be carried out in either an "open" or a "closed" hospital. The staff should elect from time to time a chairman and secretary. Much of the success of the staff organization and staff meetings is dependent upon the efficiency of these two officers who must exercise good leadership and initiative.

2. The medical staff of the hospital shall be competent and ethical. The American College of Surgeons is absolutely opposed to the practice of "fee-splitting" in any manner whatsoever, and it is required that the staff of every hospital accepted under the minimum standard shall take a very definite stand in this regard.

3. The medical staff shall draw up rules and regulations for the guidance of the professional work in the hospital. By means of such rules and regulations the medical work of the institution is coördinated and systematized.

4. The medical staff shall hold conferences periodically, at least once every month, for analysis and review of the work carried on in the institution. At these conferences there should be a careful review of the medical work during the intervening period. It is advisable that a definite agenda be prepared for each meeting. This agenda should include consideration of the following: (a) the patients now resident in the hospital; (b) the patients discharged since the last staff meeting and the results of their treatment with special reference to the unimproved, infected, or complicated, and the deaths; and (c) everything pertaining to the betterment of the hospital service.

All discussion or criticisms at staff meetings should be of a constructive nature. A record of the proceedings should be kept by the secretary. The monthly analysis sheet has been found to be of great value in the staff conference.

5. There shall be a complete medical case record of every patient passing through the institution. There are certain fundamental requirements for a good case record system in any hospital. There is, first of all, the realization that the case record is a necessary part of the care and treatment of the patient. There must be the facilities for securing and filing of such records. The component parts should be carefully assembled and when complete form a comprehensive document setting forth the following information: identification data, complaints, personal and family history, history of the present illness, physical examination, consultations and special examinations, pre-operative or pre-treatment diagnosis, operation or treatment, final diagnosis, progress notes, condition on discharge and follow-up. Every record should be a comprehensive word picture of the patient, the illness, and other essential data. It should be an honest, sincere record of facts and conclusions; otherwise it is of little value.

The securing and supervising of records is the responsibility of the physician. The filing of records is usually placed in the hands of a compe-

tent clerk. Various systems are utilized in hospitals. Whatever system is used these records should be readily accessible when required in the interest of the patient or the physician.

6. The hospital shall have an efficient laboratory and X-ray service. Both of these departments are absolutely essential for the carrying out of up-to-date diagnosis and treatment. They should be under the control of competent directors who may have technicians as their assistants. Unreliable laboratory or X-ray service is a serious detriment to any hospital and is decidedly dangerous. For the benefit of the surgical service and to promote good team work between the surgeon, the pathologist, and radiologist, it is advisable that these departments should be within easy access of the operating rooms. There are certain routine and fundamental tests or examinations which every laboratory and X-ray department should be equipped to carry on, and which may be immediately necessary at any time in any hospital. In standardized hospitals, routine pathological examination of all tissues is required in order that there may be a proper check-up on the work.

PROGRESS AND DEVELOPMENT OF THE MOVEMENT

During the past six years, hospitals of 100 beds and over in the United States and Canada have been carefully reviewed. Each year a list of hospitals meeting the minimum standard requirements is published and officially announced at the Clinical Congress of the American College of Surgeons. In addition, during the past two years, hospitals of 50 to 100 beds have been surveyed and those meeting the standard have also been added to the approved list. The progress and development of the movement today is well shown by the following figures taken from the list of approved hospitals between the years 1918 and 1923 inclusive.

Year	Hospitals Surveyed	Hospitals Approved	Percentage
	100 Beds and Over		
1918	692	89	12.9
1919	692	198	28.6
1920	692	407	58.8
1921	761	573	75.3
1922	812	677	83.4
1923	870	751	86.2
	50 to 100 Beds		
1922	812	335	41.3
1923	916	430	46.9

During 1923, 1786 hospitals were surveyed in the United States and Canada. Of these 1181, or 66.1 per cent, were approved as meeting the minimum standard.

These figures show conclusively that the medical, the hospital profession, and the public are profoundly interested in the program of hospital betterment. Without the support and coöperation of the above groups, the movement could not have succeeded.

REACTIONS TO HOSPITAL STANDARDIZATION

The hospital standardization movement, though still in its youth, has reached maturity in influence and development. It may justly be regarded as one of the greatest hospital movements known in history. The figures quoted show its magnitude and the enormous work associated with its development.

Four results of importance may be claimed for this program: (1) the shortening of the patient's days' stay in the hospital; (2) the preventing of any incompetent or unnecessary surgery; (3) the minimizing of the number of infections and complications; and (4) the lowering of the hospital death rate. In regard to the latter, it is very interesting to find that the average hospital death rate, which has been generally from 30, 40, and, in some instances, 50 per thousand patients treated, has been declining in certain institutions which have been operating strictly under the principles laid down by hospital standardization. Many instances show a falling of the death rate down to 30, 20, and even less per thousand patients.

These results have been accomplished through the sincere, honest, conscientious application of the principles as laid down by the College in the program for better hospitals. What a great thing it will be to industry if the days' stay of each industrial patient can be reduced 1 or 2 days in each illness. What a great comfort it will be to our people to know that they can go into certain hospitals where their illnesses will be more thoroughly studied and all data recorded, and through this an operation avoided or done under conditions surrounded with the maximum efficiency and safety. What a great thing to the world to find that the former average death rate per thousand patients can be reduced to 30, 20, or lower.

Possibly the greatest accomplishment to stimulate better results is the realization that there must be a physical accounting in our hospitals each month. Each institution should produce a physical balance sheet for the same reasons as there is a financial balance sheet. Both of these statements must be duly audited, the former by the staff or medical auditors, and the second by the financial auditors, or so-called chartered accountants.

The effect of hospital standardization is more

NUMBER OF HOSPITALS MEETING THE MINIMUM STANDARD

United States and Canada	100 or more Beds			50 to 99 Beds			All Hospitals		
	Number of Hospitals	Approved		Number of Hospitals	Approved		Number of Hospitals	Approved	
		Number	Percentage		Number	Percentage		Number	Percentage
Alabama	10	9	90	14	4	28.6	24	13	54.2
Arizona	2	1	50	2	0		4	1	25
Arkansas	5	4	80	10	9	90	15	13	86.7
California	47	34	72.3	20	6	20.7	76	40	52.6
Colorado	13	11	84.6	4	2	50	17	13	76.5
Connecticut	15	14	93.3	8	2	25	23	16	69.6
Delaware	2	2	100	1	0		3	2	66.7
District of Columbia	11	9	81.8	2	0		13	9	69.2
Florida	6	3	50	8	2	25	14	5	35.7
Georgia	12	9	75	17	8	47	29	17	58.6
Idaho	1	1	100	7	4	57.1	8	5	64.5
Illinois	62	42	67.7	61	21	34.4	123	63	51.2
Indiana	20	14	70	14	8	57.1	34	22	64.7
Iowa	14	12	85.7	27	15	55.6	41	27	65.9
Kansas	6	6	100	25	18	72	31	24	77.4
Kentucky	8	8	100	14	5	35.7	22	13	59.1
Louisiana	7	7	100	10	6	60	17	13	76.5
Maine	5	4	80	10	5	50	15	9	60
Maryland	15	14	93.3	11	6	54.5	26	20	76.9
Massachusetts	44	42	95.5	37	19	51.4	81	61	75.4
Michigan	25	25	100	20	9	45	45	34	75.6
Minnesota	27	27	100	20	9	45	47	36	76.6
Mississippi	5	3	60	8	2	25	13	5	38.5
Missouri	26	24	92.3	22	13	59.1	48	37	77.1
Montana	5	5	100	11	7	63.6	16	12	75
Nebraska	9	8	88.9	15	5	33	24	13	54.2
Nevada	0			2	2	100	2	2	100
New Hampshire	1	1	100	11	6	54.5	12	7	58.3
New Jersey	35	31	88.6	11	6	54.5	46	37	80.4
New Mexico	0			4	2	50	4	2	50
New York	120	106	88.3	72	35	48.6	192	141	73.4
North Carolina	5	4	80	21	11	52.4	26	15	57.6
North Dakota	5	5	100	7	2	28.6	12	7	58.3
Ohio	43	42	97.7	28	20	71.4	71	62	87.3
Oklahoma	2	2	100	12	2	16.7	14	4	28.6
Oregon	4	4	100	14	3	21.4	18	7	38.9
Pennsylvania	86	80	93	80	35	43.8	166	115	69.3
Rhode Island	3	3	100	3	2	66.7	6	5	83.3
South Carolina	5	5	100	11	4	36.4	16	9	56.3
South Dakota	4	3	75	12	10	83.3	16	13	81
Tennessee	10	9	90	12	7	58.3	22	16	72.7
Texas	21	16	76.2	22	9	40.9	43	25	58.1
Utah	5	5	100	1	1	100	6	6	100
Vermont	1	1	100	5	4	80	6	5	83.3
Virginia	7	6	85.7	28	12	42.9	35	18	51.4
Washington	16	15	93.8	18	4	22.2	34	19	55.9
West Virginia	6	6	100	23	7	30.4	29	13	44.8
Wisconsin	24	17	70.8	27	13	48.1	51	30	58.8
Wyoming	1			6	2	33.4	7	2	28.6
Totals for United States	806	669	86.7	837	384	45.9	1643	1053	64.9
Alberta	7	7	100	4	2	50	11	9	81.8
British Columbia	6	6	100	7	4	57.1	13	10	76.2
Manitoba	6	6	100	3	1	33	8	7	87.1
New Brunswick	1	1	100	9	8	88.9	10	9	90
Nova Scotia	3	3	100	8	5	100	11	11	100
Ontario	25	16	64	30	13	43.3	55	29	52.7
Prince Edward Island	0			3	3	100	3	3	100
Quebec	11	9	81.8	9	3	33.4	20	12	60
Saskatchewan	5	4	80	5	4	80	13	8	61.5
Totals for Canada	64	52	81.3	79	46	58.0	144	98	68.5
Grand Totals	870	721	86.2	916	430	47.4	1787	1181	66.1

or less generally felt throughout the institution. The organization of the medical staff stimulates better organization throughout the hospital. A higher degree of ethics practiced among the attending doctors reacts beneficially on the nursing staff and internes. Through efficiency, accuracy, and thoroughness on the professional side of the institution, a decided influence along similar lines finds expression in the work of all the other groups. This program undoubtedly establishes an all around spirit of coöperation, rapidly embracing the various groups working in the institution. There is disseminated throughout the spirit of helpfulness, one to another, developing an increasing desire for more communalistic effort than formerly. In a hospital, particularly, we must remember that the various groups working therein cannot carry on without very intimate contact. There is in every hospital an ever present interdependence among the various individuals or groups working therein. There must be provision made for interchange and interaction. In order that there be established the best possible correlation of the various activities for the greatest benefit to the patient, there must be a very highly developed spirit of coöperation.

There is an added stimulus of clinical interest resulting in closer investigation of medical problems, and the advancement of scientific research. The regular staff conference is responsible in great measure for this stimulus. The staff conference brings the doctors together in a group, frequently breaking down local jealousies and always promoting a better spirit of working and consulting together.

Anything that tends to improve the professional atmosphere of the hospital cannot help but have a decided advantage and influence throughout. Therefore, we find that the program of hospital standardization today finds expression in a universal effect on the entire institution, establishing a higher ideal of service and producing a more profound professional consciousness, causing the three groups, namely, the governmental body, the doctors, and the hospital staff, all to work together better for the patient.

Outside of the hospital, the movement is a community interest. People today are seeking the standardized hospital when ill, for they know that the service therein is better administered and supervised. The governments, municipal bodies, and philanthropic organizations make use of the list of approved hospitals when responding to requests for financial assistance. Internes select the approved hospital when furthering their experience. Young women, desiring to take up nursing, also give preference to the approved hospital, knowing that such an institution is better organized and more efficient and can give a more thorough training. In certain instances, state and provincial governments have embodied the principles of hospital standardization in the clauses of their acts when formulating hospital legislation. This movement has been endorsed by a large number of allied organizations of the United States and Canada.

THE FUTURE OF HOSPITAL STANDARDIZATION

For a period of six years the minimum standard of the American College of Surgeons has been presented to the hospitals of this continent. The general principles of the movement have been well established, and it is now recognized that the important details and further development of the program may safely be undertaken.

There are in connection with the College several committees actively engaged in the study of certain problems relating not only to the various services in our hospitals but as well to the scientific treatment of certain types of patients. The beneficial results obtained from these investigations will be made available for hospitals and should be of inestimable value to them in their advancement.

From time to time requests for information on various subjects are being made to the College. So numerous have these become of late and such is the desire of the College to assist, that it has been found advisable to establish a bureau of information for hospitals. Through this a more extensive and continuous service can be given from headquarters.

The problem of the standardization of the smaller hospitals under 50 beds is being given careful consideration and its solution will be forthcoming in the near future. While the same principles apply to all hospitals, the working out of the details is different.

Hospital standardization is but in its youth. It has now been proved to be an indispensable factor in increasing the efficiency of hospitals. This movement backed up by a more detailed service from the hospital department of the College will go on from year to year to a much greater attainment even than that which has been established at the present time. The future will, therefore, see a further development of the program and an increased interest and appreciation of the work as all groups directly or indirectly connected with the hospital service are fully convinced of its value to the patient, the doctor, the hospital, and the entire community.

LIST OF HOSPITALS

Following is a list of approved hospitals for 1923. The asterisk indicates that certain hospitals have accepted the requirements which result in the best scientific care of the patients but have not yet, for lack of time or other acceptable reasons, carried them out in every detail.

UNITED STATES

ALABAMA

100 or more beds

*Birmingham Baptist Hospital, Birmingham
Employees' Hospital, T. C. I. R. R. Co., Birmingham
Hillman Hospital, Birmingham
Mobile City Hospital, Mobile
*Moody Hospital, Dotham
Norwood Hospital, Birmingham
Providence Infirmary, Mobile
St. Vincent's Hospital, Birmingham
South Highlands Infirmary, Birmingham

50 to 100 beds

*Alabama Baptist Hospital, Selma
*Frasier Hospital, Dotham
John A. Andrew Memorial Hospital, Tuskegee
Vaughan Memorial Hospital, Selma

ARIZONA

100 or more beds

St. Joseph's Hospital, Phoenix

ARKANSAS

100 or more beds

Logan H. Roots City Memorial Hospital, Little Rock
St. Louis Southwestern R. R. Hospital, Texarkana
St. Vincent's Infirmary, Little Rock
Sparks Memorial Hospital, Fort Smith

50 to 100 bed

Baptist Hospital, Little Rock
*Davis Hospital, Pine Bluff
*Fayetteville City Hospital, Fayetteville
Leo N. Levi Memorial Hospital, Hot Springs
Michael Meager Memorial Hospital, Texarkana
St. Bernard's Hospital, Jonesboro
*St. John's Hospital, Fort Smith
*St. Joseph's Hospital, Hot Springs
St. Luke's Hospital and Annex, Little Rock

CALIFORNIA

100 or more beds

Alameda County Hospital, San Leandro
California Lutheran Hospital, Los Angeles
Children's Hospital, Los Angeles
*French Hospital, San Francisco
General Hospital, Fresno
Golden State Hospital, Los Angeles
Hospital for Children, San Francisco
Hospital of the Good Samaritan, Los Angeles
Loma Linda Sanitarium and Hospital, Loma Linda
Los Angeles General Hospital, Los Angeles
Mary's Help Hospital, San Francisco
Methodist Hospital, Los Angeles
Mt. Zion Hospital, San Francisco
*O'Connor Sanitarium, San Jose
Pasadena Hospital, Pasadena
Providence Hospital, Oakland
Sacramento Hospital, Sacramento
*St. Francis' Hospital, San Francisco
*St. Helen Sanitarium, Sanitarium
*St. Joseph's Hospital, San Francisco
St. Joseph's Hospital, San Diego
St. Mary's Hospital, San Francisco
St. Vincent's Hospital, Los Angeles
Samuel Merritt Hospital, Oakland
*San Diego County Hospital, San Diego
San Francisco Hospital, San Francisco
San Joaquin General Hospital, French Camp
Santa Barbara Cottage Hospital, Santa Barbara
Santa Clara County Hospital, San Jose
Seaside Hospital, Long Beach
Southern Pacific Hospital, San Francisco
Stanford University and Lane Hospitals, San Francisco
University of California Hospital, San Francisco
White Memorial Hospital, Los Angeles

50 to 100 beds

Clara Barton Hospital, Los Angeles
Mercy Hospital, Bakersfield
Murphy Memorial Hospital, Whittier
Orthopaedic Hospital, Los Angeles
*Paradise Valley Hospital, National City
Ramona Hospital, San Bernardino

COLORADO

100 or more beds

Beth-El Hospital, Colorado Springs
*Boulder-Colorado Sanitarium, Boulder
Children's Hospital, Denver
Glockner General Hospital, Colorado Springs
Mercy Hospital, Denver
Minnequa Hospital, Pueblo
St. Anthony's Hospital, Denver
St. Francis' Hospital, Colorado Springs
St. Joseph's Hospital, Denver
St. Luke's Hospital, Denver
St. Mary's Hospital, Pueblo

50 to 100 beds

*Denver and Rio Grande Western R. R. Hospital, Salida
*Red Cross Hospital, Salida

CONNECTICUT

100 or more beds

Bridgeport Hospital, Bridgeport
Grace Hospital, New Haven
Greenwich General Hospital, Greenwich
Hartford Hospital, Hartford
*Hospital of St. Raphael, New Haven
Lawrence and Memorial Associated Hospitals, New London
*Meriden Hospital, Meriden
*Middlesex Hospital, Middletown
New Haven Hospital, New Haven
St. Francis' Hospital, Hartford
St. Mary's Hospital, Waterbury
St. Vincent's Hospital, Bridgeport

*Stamford Hospital, Stamford
Waterbury Hospital, Waterbury

50 to 100 beds

New Britain Hospital, New Britain
*Norwalk Hospital, Norwalk

DELAWARE

100 or more beds

*Delaware Hospital, Wilmington
*Homeopathic Hospital, Wilmington

DISTRICT OF COLUMBIA

100 or more beds

*Central Hospital and Dispensary, Washington
*Children's Hospital, Washington
Columbia Hospital for Women, Washington
Freedman's Hospital, Washington
Garfield Memorial Hospital, Washington
George Washington University Hospital, Washington
Georgetown University Hospital, Washington
Providence Hospital, Washington
*Washington Sanitarium and Hospital, Washington

FLORIDA

100 or more beds

Duval County Hospital, Jacksonville
*Miami City Hospital, Miami
St. Luke's Hospital, Jacksonville

50 to 100 beds

*Faith Hospital, St. Petersburg
Gordon Keller Memorial Hospital, Tampa

GEORGIA

100 or more beds

*Davis-Fischer Hospital, Atlanta
Georgia Baptist Hospital, Atlanta
Grady Memorial Hospital, Atlanta
Harbin Hospital, Rome
Piedmont Sanitarium, Atlanta
*St. Joseph's Hospital, Savannah
St. Joseph's Infirmary, Atlanta
University Hospital, Augusta
Wesley Memorial Hospital, Atlanta

50 to 100 beds

*Atlantic Coast Line Hospital, Waycross
*Downey Hospital, Gainesville
*Park View Sanitarium, Savannah
*Savannah Hospital, Savannah
Scottish Rite Hospital, Decatur
*Telfair Hospital, Savannah
*Thomasville City Hospital, Thomasville
Wise Sanitarium, Plains

IDAHO

100 or more beds

St. Alphonsus Hospital, Boise

50 to 100 beds

Pocatello General Hospital, Pocatello
*Providence Hospital, Wallace
*St. Anthony's Hospital, Pocatello
St. Luke's Hospital, Boise

ILLINOIS

100 or more beds

*Alexian Brothers' Hospital, Chicago
Augustana Hospital, Chicago
Chicago Lying-in Hospital, Chicago
Chicago Memorial Hospital, Chicago
Children's Memorial Hospital, Chicago
Columbus Hospital, Chicago
Cook County Hospital, Chicago
Evanston Hospital, Evanston
*Frances E. Willard Hospital, Chicago
*Grant Hospital, Chicago
*Hinsdale Sanitarium, Hinsdale
Hospital of St. Anthony de Padua, Chicago
Illinois Central Hospital, Chicago
Illinois Charitable Eye and Ear Infirmary, Chicago
*Lake View Hospital, Danville
Lutheran Deaconess Hospital, Chicago
*Lutheran Memorial Hospital, Chicago
Mercy Hospital, Chicago
Michael Reese Hospital, Chicago
Misericordia Hospital, Chicago
Mt. Sinai Hospital, Chicago
*Oak Park Hospital, Oak Park
Presbyterian Hospital, Chicago
Rockford Hospital, Rockford
St. Anne's Hospital, Chicago
St. Bernard's Hospital, Chicago
St. Elizabeth's Hospital, Chicago
*St. Elizabeth's Hospital, Danville
St. Francis' Hospital, Blue Island
St. Francis' Hospital, Evanston
St. Francis' Hospital, Peoria
St. Joseph's Hospital, Chicago
*St. Joseph's Hospital, Joliet
St. Luke's Hospital, Chicago
St. Mary's Hospital, East St. Louis
St. Mary's Infirmary, Cairo
*St. Mary's Hospital, Quincy
St. Mary of Nazareth Hospital, Chicago
South Shore Hospital, Chicago
Swedish Covenant Hospital, Chicago
University Hospital, Chicago
Wesley Memorial Hospital, Chicago

50 to 100 beds

*Blessing Hospital, Quincy
*Garfield Park Hospital, Chicago
Huber Memorial Hospital, Pana
Illinois Masonic Hospital, Chicago
*Kewanee Public Hospital, Kewanee
*Lake View Hospital, Chicago
*Lutheran Hospital, Moline
*Moline Public Hospital, Moline
North Chicago Hospital, Chicago
*Olney Sanitarium, Olney
Our Savior's Hospital, Jacksonville
Passavant Memorial Hospital, Jacksonville
*Post-Graduate Hospital, Chicago
*Provident Hospital, Chicago
Ravenswood Hospital, Chicago
St. Andrew's Hospital, Murphysboro
*St. Elizabeth's Hospital, Granite City
*St. Francis' Hospital, Freeport
*St. Francis' Hospital, Kewanee
St. Mary's Hospital, La Salle
Washington Boulevard Hospital, Chicago

INDIANA

100 or more beds

Ft. Wayne Lutheran Hospital, Ft. Wayne
Gary Hospital, Gary
Indianapolis City Hospital, Indianapolis
*Methodist Episcopal Hospital, Indianapolis
*Protestant Deaconess Hospital, Evansville
Robert W. Long Hospital, Indianapolis
St. Anthony's Hospital, Terre Haute
*St. Edward's Hospital, New Albany
St. Elizabeth's Hospital, LaFayette
St. Joseph's Hospital, Ft. Wayne
St. Margaret's Hospital, Hammond
St. Mary's Hospital, Evansville
St. Mary's Mercy Hospital, Gary
*St. Vincent's Hospital, Indianapolis

50 to 100 beds

Epworth Hospital, South Bend
*Grant County Hospital, Marion
Muncie Home Hospital, Muncie
LaFayette Home and Hospital, LaFayette
Reid Memorial Hospital, Richmond
*St. Joseph's Hospital, Logansport
St. Joseph's Hospital, South Bend
Walker Hospital, Evansville

IOWA

100 or more beds

Finley Hospital, Dubuque
Iowa Lutheran Hospital, Des Moines
Iowa Methodist Hospital, Des Moines
Jennie Edmundson Hospital, Council Bluffs
Mercy Hospital, Cedar Rapids
Mercy Hospital, Council Bluffs
Mercy Hospital, Davenport
*Mercy Hospital, Des Moines
St. Joseph's Mercy Hospital, Dubuque
St. Joseph's Mercy Hospital, Sioux City
St. Vincent's Hospital, Sioux City
University Hospital, Iowa City

50 to 100 beds

*Des Moines City Hospital, Des Moines
Iowa Congregational Hospital, Des Moines
Iowa State College Hospital, Ames
Jane Lamb Memorial Hospital, Clinton
Lutheran Hospital, Hampton
Lutheran Hospital, Sioux City
New Samaritan Hospital, Sioux City
*Ottumwa Hospital, Ottumwa
Park Hospital, Mason City
St. Francis' Hospital, Waterloo
*St. Joseph's Hospital, Keokuk
St. Joseph's Hospital, Waverly
St. Joseph's Mercy Hospital, Clinton
St. Joseph's Mercy Hospital, Fort Dodge
St. Joseph's Mercy Hospital, Mason City

KANSAS

100 or more beds

Bethany Methodist Hospital, Kansas City
St. Francis' Hospital, Wichita
St. Margaret's Hospital, Kansas City
Santa Fe Hospital, Topeka
*Wesley Hospital, Wichita
*Wichita Hospital, Wichita

50 to 100 bed

Axtell Hospital, Newton
Bell Memorial Hospital, Kansas City
Bethel Deaconess Hospital, Newton
Halstead Hospital, Halstead
Hutchinson Methodist Hospital, Hutchinson
Jane C. Stormont Hospital, Topeka
*Mercy Hospital, Fort Scott
*Missouri, Kansas, and Texas R. R. Hospital, Parsons
*Mt. Carmel Hospital, Pittsburg
Providence Hospital, Kansas City
St. Anthony's Hospital, Hays
St. Anthony's Hospital, Sabetha
St. Elizabeth's Hospital, Hutchinson
St. Francis' Hospital, Topeka
St. John's Hospital, Salina
*St. Joseph's Hospital, Concordia
*St. Mary's Hospital, Winfield
St. Rose's Hospital, Great Bend

KENTUCKY

100 or more beds

Good Samaritan Hospital, Lexington
Louisville City Hospital, Louisville
Norton Memorial Hospital, Louisville
St. Anthony's Hospital, Louisville
*St. Elizabeth's Hospital, Covington
Sts. Elizabeth and Mary Hospital, Louisville
St. Joseph's Hospital, Lexington
St. Joseph's Infirmary, Louisville

50 to 100 beds

*Booth Memorial Hospital, Covington
Deaconess Hospital, Louisville
Illinois Central Hospital, Paducah
*Jewish Hospital, Louisville
Wm. Mason Memorial Hospital, Murray

LOUISIANA

100 or more beds

Charity Hospital, New Orleans
*Charity Hospital, Shreveport
Hotel Dieu, New Orleans
*Presbyterian Hospital, New Orleans
St. Francis' Sanitarium, Munroe
T. E. Schumpert Memorial Hospital, Shreveport
Touro Infirmary, New Orleans

50 to 100 beds

Eye, Ear, Nose and Throat Hospital, New Orleans
*Flint-Goodridge Hospital, New Orleans
Illinois Central R. R. Hospital, New Orleans
North Louisiana Sanitarium, Shreveport
St. Patrick's Sanitarium, Lake Charles
Shriners' Hospital for Crippled Children, Shreveport

MAINE

100 or more beds

*Central Maine General Hospital, Lewiston
General Hospital of St. Marie, Lewiston
Eastern Maine General Hospital, Bangor
*Maine General Hospital, Portland

50 to 100 beds

*Augusta General Hospital, Augusta
Bath City Hospital, Bath
Children's Hospital, Portland
St. Barnabas Hospital, Portland
*State Street Hospital, Portland

MARYLAND

100 or more beds

Allegany Hospital, Cumberland
Bay View City Hospital, Baltimore
Church Home and Infirmary, Baltimore
Colonial Hospital, Baltimore
*Franklin Square Hospital, Baltimore
Hebrew Hospital and Asylum, Baltimore
Hospital for Women of Maryland, Baltimore
Johns Hopkins Hospital, Baltimore
Maryland General Hospital, Baltimore
Mercy Hospital, Baltimore
St. Agnes' Hospital, Baltimore
St. Joseph's Hospital, Baltimore
Union Hospital, Baltimore
University Hospital, Baltimore

50 to 100 beds

Children's Hospital School, Baltimore
Emergency Hospital, Easton
Frederick City Hospital, Frederick
James Lawrence Kerman Hospital, Baltimore
*South Baltimore General Hospital, Baltimore
*Western Maryland Hospital, Cumberland

MASSACHUSETTS

100 or more beds

Beverly Hospital, Beverly
Boston City Hospital, Boston
Brockton Hospital, Brockton
Burbank Hospital, Fitchburg
Cambridge City Hospital, Cambridge
Cambridge Hospital, Cambridge
Carney Hospital, Boston
Children's Hospital, Boston
City Hospital, Fall River
Cooley-Dickinson Hospital, Northampton
Free Hospital for Women, Boston
Gale Hospital, Haverhill
Henry Heywood Memorial Hospital, Gardner
Holyoke City Hospital, Holyoke
House of Mercy Hospital, Pittsfield
Lawrence General Hospital, Lawrence
Long Island Hospital, Boston
Lowell Corporation Hospital, Lowell
Lowell General Hospital, Lowell
Lynn Hospital, Lynn
*Malden Hospital, Malden
Massachusetts Charitable Eye and Ear Hospital, Boston
Massachusetts General Hospital, Boston
Massachusetts Homeopathic Hospital, Boston
Memorial Hospital, Worcester
Mercy Hospital, Springfield
New England Deaconess Hospital, Boston
New England Hospital for Women and Children, Boston
Newton Hospital, Newton Lower Falls
Noble Hospital, Westfield
Peter Bent Brigham Hospital, Boston
Providence Hospital, Holyoke
St. Elizabeth's Hospital, Boston
St. John's Hospital, Lowell
St. Luke's Hospital, New Bedford
St. Vincent's Hospital, Worcester
Salem Hospital, Salem
Springfield Hospital, Springfield
Union Hospital, Fall River
Waltham Hospital, Waltham
Wesson Memorial Hospital, Springfield
Worcester City Hospital, Worcester

50 to 100 beds

Beth Israel Hospital, Boston
Boston Lying-in Hospital, Boston
Charles Choate Memorial Hospital, Woburn
*Chelsea Memorial Hospital, Chelsea
City Hospital, Quincy
Clinton Hospital, Clinton
Farren Memorial Hospital, Montague City
Faulkner Hospital, Boston
Goddard Hospital, Brockton
Hart Private Hospital, Roxbury
House of the Good Samaritan, Boston
Infant's Hospital, Boston
*Josiah B. Thomas Hospital, Peabody
Melrose Hospital, Melrose
Morton Hospital, Taunton
North Adams Hospital, North Adams
Somerville Hospital, Somerville
Sturdy Memorial Hospital, Attleboro
Truesdale Hospital, Fall River

MICHIGAN

100 or more beds

Battle Creek Sanitarium, Battle Creek
Blodgett Memorial Hospital, Grand Rapids
Butterworth Hospital, Grand Rapids
Children's Free Hospital, Detroit
Detroit Receiving Hospital, Detroit
Evangelical Deaconess Hospital, Detroit
Grace Hospital, Detroit
Edward W. Sparrow Hospital, Lansing
Hackley Hospital, Muskegon
Harper Hospital, Detroit
Henry Ford Hospital, Detroit
Highland Park General Hospital, Highland Park
House of Providence, Detroit
*Hurley Hospital, Flint
Mercy Hospital, Bay City
Mercy Hospital, Muskegon
New Borgess Hospital, Kalamazoo
Old Borgess Hospital, Kalamazoo
St. Joseph's Mercy Hospital, Ann Arbor
St. Mary's Hospital, Detroit
St. Mary's Hospital, Grand Rapids
*Saginaw General Hospital, Saginaw
University Hospital, Ann Arbor
W. A. Foote Memorial Hospital, Jackson
Woman's Hospital and Infants' Home, Detroit

50 to 100 beds

Bronson Methodist Hospital, Kalamazoo
Detroit Eye and Ear Hospital, Detroit
Memorial Hospital, Owosso
Mercy Hospital, Jackson
*Nichols Memorial Hospital, Battle Creek
*St. Francis' Hospital, Escanaba
St. Joseph's Hospital, Detroit
St. Joseph's Hospital, Hancock
St. Mary's Hospital, Saginaw

MINNESOTA

100 or more beds

*Abbott Hospital, Minneapolis
Ancker Hospital, St. Paul
Bethesda Hospital, St. Paul
Charles T. Miller Hospital, St. Paul
Colonial Hospital, Rochester
Deaconess Hospital, Minneapolis
Eitel Hospital, Minneapolis

Fairview Hospital, Minneapolis
Kahler Hospital, Rochester
Maternity Hospital, Minneapolis
Minneapolis General Hospital, Minneapolis
Minnesota State Hospital for Indigent Children, St. Paul
Mounds Park Sanitarium, St. Paul
Northern Pacific Beneficial Association Hospital, St. Paul
Northwestern Hospital, Minneapolis
St. Barnabas Hospital, Minneapolis
St. John's Hospital, St. Paul
St. Joseph's Hospital, St. Paul
St. Luke's Hospital, Duluth
St. Luke's Hospital, St. Paul
St. Mary's Hospital, Minneapolis
St. Mary's Hospital, Duluth
St. Mary's Hospital, Rochester
St. Paul Hospital, St. Paul
Swedish Hospital, Minneapolis
University of Minnesota Hospital, Minneapolis
Worrell Hospital, Rochester

50 to 100 beds

Hill Crest Surgical Hospital, Minneapolis
*Immanuel Hospital, Mankato
*St. Gabriel's Hospital, Little Falls
*St. Joseph's Hospital, Brainerd
*St. Joseph's Hospital, Mankato
*St. Luke's Hospital, Fergus Falls
St. Raphael's Hospital, St. Cloud
Shriners' Hospital for Crippled Children, Minneapolis
Warren General Hospital, Warren

MISSISSIPPI

100 or more beds

East Mississippi Charity Hospital, Meridian
*Mississippi State Charity Hospital, Jackson
South Mississippi Charity Hospital, Laurel

50 to 100 beds

King's Daughters' Hospital, Gulfport
Mississippi Baptist Hospital, Jackson

MISSOURI

100 or more beds

Alexian Brothers' Hospital, St. Louis
Barnes Hospital, St. Louis
Children's Mercy Hospital, Kansas City
Christian Church Hospital, Kansas City
Evangelical Deaconess Home and Hospital, St. Louis
Frisco Employees Hospital, St. Louis
Grace Hospital, Kansas City
Jewish Hospital, St. Louis
Kansas City General Hospital, Kansas City
Lutheran Hospital, St. Louis
Missouri Baptist Sanitarium, St. Louis
Missouri Pacific R. R. Hospital, St. Louis
Old General Hospital, Kansas City
Research Hospital, Kansas City
St. Anthony's Hospital, St. Louis
St. John's Hospital, St. Louis
St. Joseph's Hospital, Kansas City
St. Louis Children's Hospital, St. Louis
St. Louis City Hospital, St. Louis
St. Louis Mullanphy Hospital, St. Louis
St. Luke's Hospital, Kansas City
St. Luke's Hospital, St. Louis
St. Mary's Hospital, Kansas City
St. Mary's Infirmary, St. Louis

50 to 100 beds

Baptist Hospital, St. Louis
Barnard Free Skin and Cancer Hospital, St. Louis
Bethesda Hospital, St. Louis
*Boone County Hospital, Columbus
Frisco Employees Hospital, Springfield
Independence Sanitarium, Independence
*Parker Memorial Hospital, Columbia
St. Francis' Hospital, Cape Girardeau
St. Francis' Hospital, Maryville
St. John's Hospital, Joplin
St. Mary's Hospital, Jefferson City
Trinity Lutheran Hospital, Kansas City
University Hospital, Kansas City

MONTANA

100 or more beds

Columbus Hospital, Great Falls
*Holy Rosary Hospital, Miles City
Montana Deaconess Hospital, Great Falls
Murray Hospital, Butte
St. James Hospital, Butte

50 to 100 beds

*Bozeman Deaconess Hospital, Bozeman
*Northern Pacific Beneficial Association Hospital, Glendive
Northern Pacific Beneficial Association Hospital, Missoula
St. Ann's Hospital, Anaconda
St. Joseph's Hospital, Lewiston
St. Patrick's Hospital, Missoula
St. Vincent's Hospital, Billings

NEBRASKA

100 or more beds

Bishop Clarkson Memorial Hospital, Omaha
Nebraska Methodist Episcopal Hospital and Deaconess Home, Omaha
*Nebraska Orthopedic Hospital and Home, Lincoln
St. Elizabeth's Hospital, Lincoln
St. Francis' Hospital, Grand Island
St. Joseph's Hospital, Omaha
St. Mary's Hospital, Columbus
University of Nebraska Hospital, Omaha

50 to 100 beds

Immanuel Hospital, Omaha
*Lincoln Hospital, Lincoln
*Presbyterian Hospital, Omaha
Swedish Mission Hospital, Omaha
Wise Memorial Hospital, Omaha

NEVADA

50 to 100 beds

Elko General Hospital, Elko
St. Mary's Hospital, Reno

NEW HAMPSHIRE

100 or more beds

St. Joseph's Hospital, Nashua

50 to 100 beds

Elliott Community Hospital, Keene
Elliott Hospital, Manchester
Hospital of Notre Dame, Manchester
Mary Hitchcock Memorial Hospital, Hanover
Nashua Memorial Hospital, Nashua
Sacred Heart Hospital, Manchester

NEW JERSEY

100 or more beds

Alexian Brothers' Hospital, Elizabeth
*Atlantic City Hospital, Atlantic City
Bayonne Hospital and Dispensary, Bayonne
Christ Hospital, Jersey City
*Cooper Hospital, Camden
Elizabeth General Hospital, Elizabeth
Engelwood Hospital, Engelwood
Hackensack Hospital, Hackensack
Hospital of St. Barnabas, Newark
Jersey City Hospital, Jersey City
*Mercer Hospital, Trenton
Monmouth Memorial Hospital, Long Branch
Morristown Memorial Hospital, Morristown
Mountainside Hospital, Montclair
Muhlenberg Hospital, Plainfield
Newark Beth Israel Hospital, Newark
Newark City Hospital, Newark
Newark Memorial Hospital, Newark
Orange Memorial Hospital, Newark
Passaic General Hospital, Passaic
Paterson General Hospital, Paterson
Perth Amboy City Hospital, Perth Amboy
*Presbyterian Hospital, Newark
St. Elizabeth's Hospital, Elizabeth
St. Francis' Hospital, Jersey City
St. Francis' Hospital, Trenton
St. James' Hospital, Newark
*St. Joseph's Hospital, Paterson
*St. Mary's Hospital, Hoboken
*St. Michael's Hospital, Newark
St. Peter's General Hospital, New Brunswick

50 to 100 beds

Ann May Memorial Hospital, Spring Lake
Homeopathic Hospital, Newark
*Middlesex General Hospital, New Brunswick
Nathan and Miriam Barnert Memorial Hospital, Paterson
Newark Eye and Ear Infirmary, Newark
North Hudson Hospital, Weehawken

NEW MEXICO

50 to 100 beds

*St. Joseph's Hospital, Albuquerque
*St. Mary's Hospital, Gallup

NEW YORK

100 or more beds

Albany Hospital, Albany
*Arnot-Ogden Memorial Hospital, Elmira
Auburn City Hospital, Auburn
Bellevue Hospital, New York
*Beth David Hospital, New York
Beth Israel Hospital, New York
Beth Moses Hospital, Brooklyn
Binghamton Hospital, Binghamton
Broad Street Hospital, New York
*Bronx Hospital, New York
Brooklyn Hospital, Brooklyn
Brownsville and East New York Hospital, Brooklyn
Buffalo City Hospital, Buffalo
Buffalo General Hospital, Buffalo
Buffalo Homeopathic Hospital, Buffalo
Buffalo Hospital of Sisters of Charity, Buffalo
Bushwick Hospital, Brooklyn
Carson C. Peck Memorial Hospital, Brooklyn
Children's Hospital, Buffalo
Columbus Extension Hospital, New York
Community Hospital, New York
Coney Island Hospital, Brooklyn
Cumberland Street Hospital, Brooklyn
Deaconess Home and Hospital, Buffalo
Ellis Hospital, Schenectady
Faxton Hospital, Utica
Fifth Avenue Hospital, New York
Flower Hospital, New York
Flushing Hospital and Dispensary, Flushing
Fordham Hospital, New York
French Benevolent Society Hospital, New York
Gouverneur Hospital, New York
Grasslands Hospital, Valhalla
Greenpoint Hospital, Brooklyn
Harlem Hospital, New York
Highland Hospital, Rochester
Holy Family Hospital, Brooklyn
Homeopathic Hospital, Albany
House of the Good Samaritan, Watertown
Hospital of the Good Shepherd, Syracuse
*Ithaca City Hospital, Ithaca
Jewish Hospital, Brooklyn
King's County Hospital, Brooklyn
Knickerbocker Hospital, New York
Lebanon Hospital, New York
Lenox Hill Hospital, New York
Lincoln Hospital, New York
Long Island College Hospital, Brooklyn
Manhattan Eye and Ear Hospital, New York
Memorial Hospital for Cancer and Allied Diseases, New York
Methodist Episcopal Hospital, Brooklyn
Metropolitan Hospital, New York
Misericordia Hospital, New York
Montefiore Hospital, New York
Mt. Sinai Hospital, New York
Mt. St. Mary's Hospital, Niagara Falls
Mt. Vernon Hospital, Mt. Vernon
New York City Hospital, Blackwell's Island, New York
*New York Eye and Ear Infirmary, New York
New York Foundling Home, New York
New York Hospital, New York
New York Infirmary for Women and Children, New York
New York Nursery and Children's Hospital, New York
New York Orthopedic Hospital, New York
New York Post-Graduate Hospital, New York
*New York Skin and Cancer Hospital, New York
New York Society for Relief of the Ruptured and Crippled, New York
*New York State Orthopedic Hospital for Children, West Haverstraw
Niagara Falls Memorial Hospital, Niagara Falls
Norwegian Lutheran Deaconess Hospital, Brooklyn
*Olean General Hospital, Olean
Oneida County Hospital, Rome
Park Avenue Clinical Hospital, Rochester
Presbyterian Hospital, New York
*Prospect Heights Hospital and Maternity, Brooklyn
Rochester General Hospital, Rochester
Rochester Homeopathic Hospital, Rochester
Roosevelt Hospital, New York
St. Catherine's Hospital, Brooklyn
*St. Elizabeth's Hospital and Home, Utica
St. Francis' Hospital, New York
St. John's Brooklyn Hospital, Brooklyn
St. John's Hospital, Long Island
St. John's Riverside Hospital, Yonkers
*St. Joseph's Hospital, Syracuse
St. Luke's Hospital, New York

*St. Luke's Hospital, Utica
St. Mark's Hospital, New York
St. Mary's Free Hospital for Children, New York
St. Mary's Hospital, Brooklyn
St. Mary's Hospital, Rochester
St. Peter's Hospital, Albany
St. Peter's Hospital, Brooklyn
St. Vincent's Hospital, New York
Samaritan Hospital, Troy
Sloane Hospital for Women, New York
*Soldiers and Sailors Memorial Hospital, Utica
Staten Island Hospital, Tompkinsville
Syracuse Memorial Hospital, Syracuse
The Sanitarium, Clifton Springs
Troy Hospital, Troy
*United Hospital, Port Chester
*United Israel Zion Hospital, Brooklyn
Women's Hospital, New York
Wyckoff Heights Hospital, Brooklyn
Yonker's Homeopathic Hospital and Maternity, Yonkers

50 to 100 beds

Amsterdam City Hospital, Amsterdam
Anthony Brady Hospital, Albany
Babies Hospital, New York
*Beekman Street Hospital, New York
*Broad Street Hospital, Oneida
*Brooks Memorial Hospital, Dunkirk
*Buffalo Columbus Hospital, Buffalo
*Champlain Valley Hospital, Plattsburg
Columbus Hospital, New York
Emergency Hospital of Sisters of Charity, Buffalo
General Hospital, Syracuse
Geneva City Hospital, Geneva
Glens Falls Hospital, Glens Falls
*Harbor Hospital, Brooklyn
Hudson City Hospital, Hudson
Jamaica Hospital, Jamaica
Jewish Maternity Hospital, New York
Kingston City Hospital, Kingston
Lawrence Hospital, Bronxville
*Leonard Hospital, Troy
Mary Immaculate Hospital, Jamaica
Mary McClelland Hospital, Cambridge
*Nassau Hospital, Mineola, Long Island
*Nathan Littauer Hospital, Gloversville
New Rochelle Hospital, New Rochelle
Ossining Hospital, Ossining
Peoples Hospital, New York
Reconstruction Hospital, New York
Rome Hospital, Rome
St. Bartholomew's Hospital, New York
*St. Joseph's Hospital, Yonkers
St. Vincent's Hospital, West New Brighton
Saratoga Hospital, Saratoga Springs
*Swedish Hospital, Brooklyn
*White Plains Hospital, White Plains

NORTH CAROLINA

100 or more beds

*James Walker Memorial Hospital, Wilmington
*North Carolina Baptist Hospital, Winston-Salem
*St. Leo's Hospital, Greensboro
Watts Hospital, Durham

50 to 100 beds

Atlantic Coast Lines R. R. Hospital, Rocky Mount
Charlotte Sanitarium, Charlotte
City Hospital, Winston-Salem
Highpoint Hospital, Highpoint
Highsmith Hospital, Fayetteville
*Long's Sanitarium, Statesville
*Mercy Hospital, Charlotte
Parkview Hospital, Rocky Mount
*Rex Hospital, Raleigh
Rutherfordton Hospital, Rutherfordton
Salisbury Hospital, Salisbury

NORTH DAKOTA

100 or more beds

Bismarck Evangelical Deaconess Hospital, Bismarck
Grand Forks Deaconess Hospital, Grand Forks
St. Alexius' Hospital, Bismarck
St. John's Hospital, Fargo
St. Luke's Hospital, Fargo

50 to 100 beds

*St. Joseph's Hospital, Minot
St. Michael's Hospital, Grand Forks

OHIO

100 or more beds

Aultman Hospital, Canton
Bethesda Hospital, Cincinnati
Christ Hospital, Cincinnati
Cincinnati General Hospital, Cincinnati
City Hospital of Akron, Akron
Cleveland City Hospital, Cleveland
Glenville Hospital, Cleveland
Good Samaritan Hospital, Cincinnati
*Good Samaritan Hospital, Zanesville
Grant Hospital, Columbus
Hawkes Hospital of Mt. Carmel, Columbus
Huron Road Hospital, Cleveland
Jewish Hospital, Cincinnati
Lakeside Hospital, Cleveland
Lima Hospital, Lima
Lucas County Hospital, Toledo
*Lutheran Hospital, Cleveland
Mercy Hospital, Canton
Mercy Hospital, Hamilton
Mercy Hospital, Toledo
Miami Valley Hospital, Dayton
Mt. Sinai Hospital, Cleveland
*Peoples Hospital, Akron
St. Alexis' Hospital, Cleveland
St. Ann's Infant Asylum and Hospital, Cleveland
St. Elizabeth's Hospital, Dayton
St. Elizabeth's Hospital, Youngstown
St. Francis' Hospital, Columbus
St. John's Hospital, Cleveland
*St. Joseph's Hospital, Lorain
St. Luke's Hospital, Cleveland
St. Mary's Hospital, Cincinnati
St. Rita's Hospital, Lima
St. Vincent's Hospital, Cleveland
St. Vincent's Hospital, Toledo
*Seton Hospital, Cincinnati
Springfield City Hospital, Springfield
Toledo Hospital, Toledo
University Hospital, Columbus
*White Cross Hospital, Columbus
*Woman's Hospital, Cleveland
Youngstown Hospital, Youngstown

50 to 100 beds

Alliance City Hospital, Alliance
Bellaire City Hospital, Bellaire

*Bethesda Hospital, Zanesville
Children's Hospital, Cincinnati
Children's Hospital, Columbus
Deaconess Hospital, Cincinnati
Flower Hospital, Toledo
Good Samaritan Hospital, Sandusky
Lakewood Hospital, Lakewood
Mary Day Nursery and Children's Hospital, Akron
Massillon City Hospital, Massillon
Maternity and Children's Hospital, Toledo
Maternity Hospital, Cleveland
*Memorial Hospital, Fremont
Mercy Hospital, Columbus
Newark City Hospital, Newark
Robinwood Hospital, Toledo
Salem Hospital, Salem
Schirrman Hospital, Portsmouth
Warren City Hospital, Warren

OKLAHOMA

100 or more beds

St. Anthony's Hospital, Oklahoma City
State University Hospital, Oklahoma City

50 to 100 beds

*El Reno Sanitarium, El Reno
*Wesley Hospital, Oklahoma City

OREGON

100 or more beds

Emmanuel Hospital, Portland
Good Samaritan Hospital, Portland
Multnomah County Hospital, Portland
St. Vincent's Hospital, Portland

50 to 100 beds

Portland Sanitarium, Portland
Portland Surgical Hospital, Portland
*Sacred Heart Hospital, Medford

PENNSYLVANIA

100 or more beds

Abingdon Memorial Hospital, Abingdon
Allegheny General Hospital, Pittsburgh
Allentown Hospital, Allentown
Altoona Hospital, Altoona
Braddock General Hospital, Braddock
Chester County Hospital, West Chester
*Chester Hospital, Chester
Chestnut Hill Hospital, Philadelphia
Children's Homeopathic Hospital, Philadelphia
Children's Hospital, Pittsburgh
Clearfield Hospital, Clearfield
Columbia Hospital, Pittsburgh
Conemaugh Valley Memorial Hospital, Johnstown
Easton Hospital, Easton
Elizabeth Steel Magee Hospital, Pittsburgh
Frankford Hospital, Philadelphia
George F. Geisinger Hospital, Danville
Germantown Dispensary and Hospital, Philadelphia
Hahnemann Hospital, Scranton
Hahnemann Medical and Surgical Hospital, Philadelphia
Hamot Hospital, Erie
Harrisburg Hospital, Harrisburg
Homeopathic Medical and Surgical Hospital, Pittsburgh
Hospital of the Protestant Episcopal Church, Philadelphia
Hospital of the University of Pennsylvania, Philadelphia
Hospital of the Women's Medical College, Philadelphia
*J. Lewis Crozer Home and Hospital, Chester
Jefferson Hospital, Philadelphia
Jewish Hospital, Philadelphia
*Kane Summitt Hospital, Kane
Lancaster General Hospital, Lancaster
Lankenau Hospital, Philadelphia
*McKeesport Hospital, McKeesport
Medico Chirurgical Hospital, Philadelphia
Memorial Hospital, Roxborough
Mercy Hospital, Johnstown
Mercy Hospital, Philadelphia
Mercy Hospital, Pittsburgh
Mercy Hospital, Wilkes-Barre
Methodist Episcopal Hospital, Philadelphia
Misericordia Hospital, Philadelphia
Moses Taylor Hospital, Scranton
Mt. Sinai Hospital, Philadelphia
Passavant Hospital, Pittsburgh
Pennsylvania Hospital, Philadelphia
Philadelphia General Hospital, Philadelphia
Philadelphia Polyclinic Hospital, Philadelphia
Pittsburgh Hospital, Pittsburgh
Pottsville Hospital, Pottsville
Presbyterian Hospital, Philadelphia
Presbyterian Hospital, Pittsburgh
Reading Hospital, Reading
Robert Packer Hospital, Sayre
Sacred Heart Hospital, Allentown
*St. Agnes' Hospital, Philadelphia
St. Francis' Hospital, Pittsburgh
St. John's General Hospital, Pittsburgh
St. Joseph's Hospital, Lancaster
St. Joseph's Hospital, Philadelphia
St. Joseph's Hospital, Pittsburgh
St. Joseph's Hospital, Reading
St. Luke's Hospital, South Bethlehem
St. Margaret's Hospital, Pittsburgh
St. Mary's Hospital, Philadelphia
St. Vincent's Hospital, Erie
Samaritan Hospital, Philadelphia
South Side Hospital, Pittsburgh
State Hospital for Injured Persons, Ashland
State Hospital of Middle Coal Fields, Hazelton
State Hospital of Northern Anthracite Region of Pennsylvania, Scranton
Uniontown Hospital, Uniontown
Washington Hospital, Washington
West Philadelphia Hospital for Women, Philadelphia
Western Pennsylvania Hospital, Pittsburgh
Wilkes-Barre City Hospital, Wilkes-Barre
*Williamsport Hospital, Williamsport
Wills Hospital, Philadelphia
Women's Homeopathic Hospital, Philadelphia
Women's Hospital, Philadelphia
York Hospital and Dispensary, York

50 to 100 beds

Annie M. Warner Hospital, Gettysburg
Bainbridge Private Hospital, Philadelphia
Bryn Mawr Hospital, Bryn Mawr
Carlisle Hospital, Carlisle
Children's Hospital, Philadelphia
Children's Hospital of Mary J. Drexel Home, Philadelphia
Citizens General Hospital, New Kensington
*Columbia Hospital, Columbia
Cottage State Hospital, Blossburg
*DuBois Hospital, DuBois
Good Samaritan Hospital, Lebanon
Howard Hospital, Philadelphia
*Homeopathic Hospital, West Chester

Indiana Hospital, Indiana
J. C. Blair Memorial Hospital, Huntingdon
*Jewish Maternity Hospital, Philadelphia
Kensington Hospital for Women, Philadelphia
Maple Avenue Hospital, DuBois
*Memorial Hospital of Monongahela, Monongahela
*Montefiore Hospital, Pittsburgh
*Ohio Valley Hospital, McKees Rock
Oil City Hospital, Oil City
Palmerton Hospital, Palmerton
Philadelphia Lying-in Charity Hospital, Philadelphia
*Pittston Hospital, Pittston
*Polyclinic Hospital, Harrisburg
Preston Retreat Hospital, Philadelphia
*Providence Hospital, Beaver Falls
St. Luke's Homeopathic Hospital, Philadelphia
St. Vincent's Hospital for Women and Children, Philadelphia
*Sewickley Hospital, Sewickley
*State Hospital of Nanticoke, Nanticoke
*Stetson Hospital, Philadelphia
Suburban General Hospital, Bellevue
Windber Hospital, Windber

RHODE ISLAND

100 or more beds

Newport Hospital, Newport
Rhode Island Hospital, Providence
St. Joseph's Hospital, Providence

50 to 100 beds

Memorial Hospital, Pawtucket
Providence Lying-in Hospital, Providence

SOUTH CAROLINA

100 or more beds

Columbia Hospital, Columbia
Florence Infirmary, Florence
Greenville City Hospital, Greenville
Roper Hospital, Charleston
South Carolina Baptist Hospital, Columbia

50 to 100 beds

Anderson County Hospital, Anderson
Baker Sanatorium, Charleston
St. Francis Xavier Infirmary, Charleston
*University Hospital, Anderson

SOUTH DAKOTA

100 or more beds

McKennan Hospital, Sioux Falls
*Sacred Heart Hospital, Yankton
St. Luke's Hospital, Aberdeen

50 to 100 beds

Bartron Hospital, Watertown
Lincoln Hospital, Aberdeen
Luther Hospital, Watertown
*Moe Hospital, Sioux Falls
New Madison Hospital, Madison
Methodist State Hospital, Mitchell
*Peabody Hospital, Webster
*St. Joseph's Hospital, Deadwood
*St. Joseph's Hospital, Mitchell
St. Mary's Hospital, Pierre

TENNESSEE

100 or more beds

Baptist Hospital, Memphis
Erlanger Hospital, Chattanooga
George W. Hubbard Hospital, Nashville
Knoxville General Hospital, Knoxville
Memphis General Hospital, Memphis
Nashville City Hospital, Nashville
St. Joseph's Hospital, Memphis
St. Thomas Hospital, Nashville
Vanderbilt Hospital, Nashville

50 to 100 beds

Baird-Dulaney Hospital, Dyersburg
*Fort Sanders Hospital, Knoxville
Lucy Brinkley Hospital, Memphis
Newell and Newell Sanitarium, Chattanooga
*Protestant Hospital, Nashville
*Riverside Hospital, Knoxville
Woman's Hospital of State of Tennessee, Nashville

TEXAS

100 or more beds

Baptist Hospital, Houston
Baylor Hospital, Dallas
Central Texas Baptist Sanitarium, Waco
Hotel Dieu, Beaumont
John Sealy Hospital, Galveston
Parkland Hospital, Dallas
Providence Hospital, Waco
St. Joseph's Infirmary, Ft. Worth
St. Joseph's Infirmary, Houston
St. Mary's Infirmary, Galveston
St. Paul's Sanitarium, Dallas
Santa Fe Hospital, Temple
Santa Rosa Infirmary, San Antonio
Scott and White Sanitarium, Temple
Seton Infirmary, Austin
Southern Pacific Hospital, Houston

50 to 100 beds

All Saints' Hospital, Ft. Worth
*City and County Hospital, Houston
*Frances Ann Lutcher Hospital, Orange
Harris Sanitarium, Ft. Worth
International and Great Northern R. R. Hospital, Palestine
King's Daughters' Hospital, Temple
Masonic Hospital, El Paso
*St. Joseph's Infirmary, Paris
*Texarkana Sanitarium, Texarkana

UTAH

100 or more beds

Doctor W. H. Groves Latter Day Saints' Hospital, Salt Lake City
Holy Cross Hospital, Salt Lake City
St. Mark's Hospital, Salt Lake City
Salt Lake County Hospital, Salt Lake City
Thomas D. Dee Memorial Hospital, Ogden

50 to 100 beds

Utah-Idaho Hospital, Logan

VERMONT

100 or more beds

Mary Fletcher Hospital, Burlington

50 to 100 beds

Fanny Allen Hospital, Winooski
Heaton Hospital, Montpelier
Rutland Hospital, Rutland
*St. Albans Hospital, St. Albans

VIRGINIA

100 or more beds

Chesapeake and Ohio R. R. Hospital, Clifton Forge
*Hospital Division of Medical College of Virginia, Richmond
Norfolk Protestant Hospital, Norfolk
St. Vincent's Hospital, Norfolk
Stuart Circle Hospital, Richmond
University of Virginia Hospital, Charlottesville

50 to 100 beds

Elizabeth Buxton Hospital, Newport News
George Ben Johnson Memorial Hospital, Abington
*Grace Hospital, Richmond
Jefferson Hospital, Roanoke
Johnston-Willis Sanitarium, Richmond
King's Daughters' Hospital, Staunton
Lake View Hospital, Suffolk
Lewis Gale Hospital, Roanoke
*Parrish Memorial Hospital, Portsmouth
St. Elizabeth's Hospital, Richmond
St. Luke's Hospital, Richmond
Sarah Leigh Hospital, Norfolk

WASHINGTON

100 or more beds

Children's Orthopedic Hospital, Seattle
Columbus Sanitarium, Seattle
King County Hospital, Seattle
Maria Beard Deaconess Hospital, Spokane
*Northern Pacific Hospital, Tacoma
Providence Hospital, Seattle
Sacred Heart Hospital, Spokane
St. Elizabeth's Hospital, Yakima
St. Joseph's Hospital, Tacoma
St. Luke's Hospital, Spokane
St. Mary's Hospital, Walla Walla
Seattle City Hospital, Seattle
Seattle General Hospital, Seattle
Swedish Hospital, Seattle
Tacoma General Hospital, Tacoma

50 to 100 beds

Minor Private Hospital, Seattle
*St. Joseph's Hospital, Bellingham
St. Luke's Hospital, Seattle
Virginia Mason Hospital, Seattle

WEST VIRGINIA

100 or more beds

Charleston General Hospital, Charleston
Kessler Hatfield Hospital, Huntington
Ohio Valley Hospital, Wheeling
St. Mary's Hospital, Clarksburg
Welch Hospital, No. 1, Welch
Wheeling Hospital, Wheeling

50 to 100 beds

*Beckley Hospital, Beckley
Bluefield Sanitarium, Bluefield
Coal Valley Hospital, Montgomery
Cook Hospital, Fairmont
Davis Memorial Hospital, Elkins
Guthrie Hospital, Huntington
McKendree Hospital, No. 2, McKendree

WISCONSIN

100 or more beds

LaCrosse Lutheran Hospital, LaCrosse
Luther Hospital, Eau Claire
Madison General Hospital, Madison
Mercy Hospital, Janesville
Milwaukee County Hospital, Milwaukee
Milwaukee Hospital, Milwaukee
Mt. Sinai Hospital, Milwaukee
St. Agnes' Hospital, Fond du Lac
St. Elizabeth's Hospital, Appleton
St. Francis Hospital, LaCrosse
St. Joseph's Hospital, Marshfield
St. Joseph's Hospital, Milwaukee
*St. Mary's Hospital, Green Bay
St. Mary's and Mercy Hospital, Oshkosh
St. Mary's Hospital, Milwaukee
St. Mary's Hospital, Superior
Trinity Hospital, Milwaukee

50 to 100 beds

*Columbia Hospital, Milwaukee
Evangelical Deaconess Hospital, Milwaukee
Grandview Hospital, LaCrosse
*Hanover General Hospital, Milwaukee
*Holy Family Hospital, Manitowoc
*LaCrosse Public Hospital, LaCrosse
Milwaukee Children's Hospital, Milwaukee
*Milwaukee Maternity and General Hospital, Milwaukee
Misericordia Hospital, Milwaukee
St. Joseph's Hospital, Dodgeville
*St. Luke's Hospital, Racine
St. Mary's Hospital, Madison
St. Mary's Hospital, Racine

WYOMING

50 to 100 beds

*Casper Private Hospital, Casper
Wheatland Hospital, Wheatland

CANADA

ALBERTA

100 or more beds

General Hospital, Calgary
Edmonton General Hospital, Edmonton
Holy Cross Hospital, Calgary
Medicine Hat Hospital, Medicine Hat
Misericordia Hospital, Edmonton
Royal Alexandra Hospital, Edmonton
University of Alberta Hospital, Edmonton

50 to 100 beds

Lamont Public Hospital, Lamont
*Galt Hospital, Lethbridge

BRITISH COLUMBIA

100 or more beds

Provincial Royal Jubilee Hospital, Victoria
Royal Columbian Hospital, New Westminster
Royal Inland Hospital, Kamloops

St. Joseph's Hospital, Victoria
St. Paul's Hospital, Vancouver
Vancouver General Hospital, Vancouver

50 to 100 beds

*Queen Victoria Hospital, Revelstoke
*St. Eugene Hospital, Cranbrook
*St. Mary's Hospital, New Westminster
*Vernon Jubilee Hospital, Vernon

MANITOBA

100 or more beds

Brandon General Hospital, Brandon
Children's Hospital, Winnipeg
Grace Hospital, Winnipeg
Misericordia Hospital, Winnipeg
St. Boniface's Hospital, St. Boniface
Winnipeg General Hospital, Winnipeg

50 to 100 beds

Victoria Hospital, Winnipeg

NEW BRUNSWICK

100 or more beds

General Public Hospital, St. John

50 to 100 beds

Chipman Memorial Hospital, St. Stephen
Hotel Dieu, Campbellton
Hotel Dieu, Chatham
Miramichi Hospital, New Castle
Moncton Hospital, Moncton
St. John's Infirmary, St. John
Restigouche and Bay of Chaleur Soldiers' Memorial Hospital, Campbellton
*Victoria Public Hospital, Frederickton

NOVA SCOTIA

100 or more beds

St. Joseph's Hospital, Glace Bay
Salvation Army Hospital, Halifax
Victoria General Hospital, Halifax

50 to 100 beds

*Aberdeen Hospital, New Glasgow
Children's Hospital, Halifax
General Hospital, Glace Bay
Halifax Infirmary, Halifax
Highland View Hospital, Amherst
St. Martha's Hospital, Antigonish
*Sydney City Hospital, Sydney
*Yarmouth Hospital, Yarmouth

ONTARIO

100 or more beds

General Hospital, Kingston
Grace Hospital, Toronto
Hamilton General Hospital, Hamilton
Hotel Dieu, Kingston
McKellar General Hospital, Ft. William
Ottawa General Hospital, Ottawa
Protestant General Hospital, Ottawa
St. Joseph's Hospital, Hamilton
*St. Joseph's Hospital, London
St. Joseph's Hospital, Sudbury
St. Luke's Hospital, Ottawa
St. Michael's Hospital, Toronto
Sick Children's Hospital, Toronto
Toronto General Hospital, Toronto
Western Hospital, Toronto
Victoria Hospital, London

50 to 100 beds

*General Hospital, Brockville
General Hospital, Sault Ste. Marie
*Niagara Falls General Hospital, Niagara Falls
Nicholls Hospital, Peterboro
Oshawa Memorial Hospital, Oshawa
*Owen Sound General and Marine Hospital, Owen Sound
*Public Hospital, Smith Falls
*St. Francis' Hospital, Smith Falls
St. Joseph's Hospital, Peterboro
St. Vincent de Paul Hospital, Brockville
Welland County Hospital, Welland
Wellesley Hospital, Toronto
Women's College Hospital, Toronto

PRINCE EDWARD ISLAND

50 to 100 beds

Charlottetown Hospital, Charlottetown
*Prince County Hospital, Summerside
Prince Edward Island Hospital, Charlottetown

QUEBEC

100 or more beds

Children's Memorial Hospital, Montreal
General St. Vincent Hospital, Sherbrooke
Hotel Dieu, Montreal
Jeffery Hale's Hospital, Quebec
Montreal General Hospital, Montreal
Notre Dame Hospital, Montreal
Sainte Justine Pour Les Enfants, Montreal
Royal Victoria Hospital, Montreal
Western Hospital, Montreal

50 to 100 beds

Montreal Maternity Hospital, Montreal
St. Francois d'Assise, Quebec
*Sherbrooke Hospital, Sherbrooke

SASKATCHEWAN

100 or more beds

Grey Nuns Hospital, Regina
Providence Hospital, Moose Jaw
St. Paul's Hospital, Saskatoon
*Saskatoon City Hospital, Saskatoon

50 to 100 beds

Holy Family Hospital, Prince Albert
Notre Dame Hospital, North Battleford
*Moose Jaw General Hospital, Moose Jaw
*Victoria Hospital, Prince Albert

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